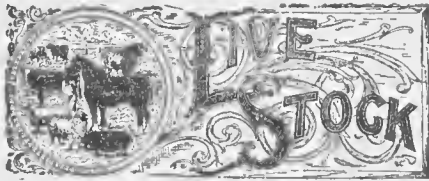


THE NOR-WEST FARMER.

Vol. 18; No. 11.
Whole No. 215.

WINNIPEG, MANITOBA, JUNE 5, 1899.

\$1 a Year,
in advance.



Innisfail Spring Show.

This enterprising agricultural society, not satisfied with holding a most successful fall show, held a spring show on May 12. The day turned out a very unpleasant one and the season being late, many farmers would not leave their work to attend or take out stock. For a first attempt, however, the directors are well satisfied.

In heavy draft stallions two good Clydesdales were shown. Friar Tuck, owned by Jas. Brown, a big useful horse, possessing in his veins the best blood of the breed, was placed

to a stylish bull shown by Jas. Wilson. In the yearling class Craigsides, owned by Wm. Dea, was placed first. J. N. McLean's entry second, and that of Jas. Wilson third. Ormonde won a special prize.

We have pleasure in presenting two excellent illustrations of the stock shown at the show, the photos of which were taken by Mr. Playle.

Western Agricultural and Arts Association.

The prize list of the Western Agricultural and Arts Association has been issued and distributed. It is a good one and a credit to the exhibition association. In the horse section the principal change made has been in separating the heavy draught and agricultural horses, making a full class for each, with good prizes. Sweepstakes and diplomas for best stallions (light and

to be a most interesting programme. Entries close July 15th. Copies of the prize list can be had by addressing the manager, F. J. Clark, Brandon, Man.

Heredity of Normal Characters.

The resemblance of offspring to their parents has been so frequently noted that it has given rise to the well-known saying, "Like produces like." In a general way this truth has been accepted, because the resemblances that have come to our notice are so marked that we are compelled to believe there must be some truth in it. Those who have made a study of the laws of breeding, however, go one step further. The resemblance of offspring to parent, they say, is not confined simply to the external or more easily seen characters, but applies as well to the internal formation of the body and to the functions of every organ. In other words, at the time of birth the character



Horses at the Innisfail, Alta., Spring Show, held May 12th, 1899.

first, while second place was given to a somewhat smaller but very well-built horse, shown by Chas. Peters. In the class for riding and driving horses first place went to an old favorite as a sire of drivers, Starline, shown by J. Simpson; second to P. J. Bouchier's Thoroughbred, and third to W. H. Kemp's Hackney Viking, bred by Rawlinson Bros. Sweepstakes for best horse on the grounds went to P. J. Bouchier, also special for best Thoroughbred. Special for best Hackney went to W. H. Kemp.

The show of cattle was good, though not as large as would have been had the farmers not been so busy seeding. In all 13 registered bulls were shown. H. Raikes showed his well bred, low set blocky specimen of the beef breed, Honest Peter, a 3-year-old bred by MacGregor Raikes, of Barrie, Ont., and secured first place with him. Second place was given to F. Whiteside, of Penhold, for Ormonde. In 2-year-olds, James Brown's Quality was placed first. He is a grandson of the renowned Indian Chief. Strathglass, owned by Messrs. Proctor and Wills, gave Quality a close run for first place. Third place went

heavy), and best mare, any age, have been dropped. In the cattle section the class for Shorthorn stock bred in Manitoba and the Territories has been extended by adding good prizes for four-year-old bulls and cows. A prize for four-year-old bulls has been extended to all the breeds. The prize for herd of four calves has been dropped in all the breeds. A special prize of \$25 is offered for the best herd on the grounds, any pure-bred breed. Such a prize is more or less a farce, as it never decides the superiority of any breed.

In the sheep section a class has been made for Oxford Downs, otherwise the prizes are the same as offered last year.

In the swine classes the Dominion Swine Breeders' Association offer a special prize of \$7.50 for the best sow, any age, in each class.

Poultry prizes are very similar to those offered last year, with a large list of special prizes, besides a class for pigeons and rabbits. Dairy, field and garden products have also full prize lists. The series of attractions and races of one kind and another arranged for will make what promises

and quality of the various organs of the body, and of its structure, are all derived from the parents, and it is further believed that they include every peculiarity in the organization of both parents. The exceptions, or rather, supposed exceptions, arise when the hereditary tendency is hidden, obscured or over-ridden, for the time being, without being wholly suppressed, by the stronger influence of other laws.

Let us look at this and see what it means to the breeder of live stock. We take it to mean that the characteristics of the structure, size, etc., of the bones and muscles, of the digestive system, of the organs of nutrition, of reproduction, of the nervous system and mental condition are all transmitted and reproduced in the offspring without change, as well as the natural habits, predispositions, temperament, and power of endurance. Here, then, is the basis upon which a breeder must work, and his aim should be to so unite in the offspring the blood of animals possessing the qualities of form or function he desires to secure in his herd. This is a broad statement, but let us see if it is not so. If we study the remains

of animals as found in the rocks we find that the different species show similar characters all down through the past ages. The external forms of wild animals have been so faithfully reproduced generation after generation that we easily recognize them, time has changed their characters so very little. We see this more clearly in animals that have been preserved in Egyptian monuments. The animals of Egypt to-day possess essentially the same outward form as their mummified brethren of thousands of years ago. As the process of development from the embryo to the mature form remains the same there must be a law of heredity. We see the same thing in races of men that have been kept pure, such as the Jews and the gypsies. The complexion, features, and other distinguishing characteristics of these people are the same as they were centuries ago. In our improved breeds of live stock it is a well-known fact that certain families possess greater power of stamping their own good qualities on their offspring, and consequently are prized for this by breeders.

In regard to the inheritance of internal qualities, as well as external characteristics, it is a well-known fact observed by all that muscular power runs in certain families and is inherited. The power of endurance and muscular development seen in the Herod and Eclipse families of the race-horse and the Messenger family of the trotting horse are also examples of the heredity of internal powers.

The power of digesting, assimilating and converting large amounts of food into flesh—the feeding quality as it is called—is a most important characteristic of our beef-producing breeds and one upon whose hereditary transmission we depend when we use a good size of one of these breeds. The power of giving a large flow of milk is an hereditary quality we look for in a good dairy cow.

Fecundity is another characteristic of certain families that breeders know to be hereditary, especially in sheep. Numerous examples of this can be given both from the records of live stock and the human family. The opposite is also noticed in other families, and it is therefore an important matter to the breeder of live stock when laying the foundation of a herd to obtain animals possessing this trait in a marked degree that he may benefit by its hereditary transmission.

In regard to the hereditary transmission of mental peculiarities every one has noticed examples of this in the human family. We frequently see the same temper and disposition inherited in our domestic animals, especially in dogs, but the best examples come also from the human family. Peculiar structures of ear, eye, nose and vocal organs are all well known to be hereditary. Certain families are "born musicians," an expression familiar to all. Color blindness, shortsightedness, hair turning grey and teeth falling out at certain ages are other peculiarities of the human family well-known to be hereditary.

Breeders of live stock will do well to remember when breeding their animals that the operation of the law of heredity is constant, and relates to every peculiarity of the body. By using grade sires the only possible result is to grade down the herd, and the way to obtain the qualities now desired in our live stock is to use sires possessing those qualities in a marked degree.

Dr. T. W. Simpson, veterinarian, of Salt-coats, has invented a chemical preparation for branding cattle or other animals. It is in the form of a fluid and requires to be applied with a brush. It is said to be painless. If this fluid is equal to the work it should quickly supercede the cruel practice of branding with hot irons.

BREEDERS' DIRECTORY

CARDS under this head inserted at the rate of \$1.50 per line per year. No card accepted under two lines, nor for less than six months.

D. FRASER & SONS, Emerson, Man. Breeders and importers of Shorthorns, Shropshire and Southdown Sheep. Pedigree Poland China Pigs a specialty, from the best strains in the United States.

W. J. HELLIWELL, Oak Lake, breeder of Short-horn Cattle, Shropshire Sheep, Barred Plymouth Rocks, Light Brahmas and Partridge Cochins. All kinds of above young stock for sale. Prices right.

R. L. LANG, Spruce Bank Farm, Oak Lake, Man., breeder and importer of Shorthorn Cattle, improved Berkshire Swine, White Wyandottes and White Leghorns. Young stock for sale. 2448

WM. McBRIDE, importer and breeder of improved Chester White Pigs. Young stock for sale. Pairs and trios furnished not akin. Address—Wm. McBride, Box 258, Portage la Prairie, Man.

W. J. McCOMB, Beresford, Man., breeder of Pure bred Herefords. I have a large herd of young stock, also a few aged breeders for sale. My stock is of the best and prices right. 2453

JAMES GLENNIE, Arden, Man. Importer and breeder of Holstein-Friesian Cattle. Bull Calves of the famous Teake strain for sale. Write for prices. Box 95.

J. J. MOIR, Glendinning, Man. P. China Pigs, B. P. Rocks, L. Brahmas, S. L. Wyandottes, B. Turkeys, P. Ducks. Orders booked for pigs and eggs.

KENNETH McLEOD, Dugald, Manitoba. Chester White and Suffolk Pigs for sale. My stock are prize winners at the Winnipeg Industrial Exhibition.

JICKLING & SONS, Dew Drop Ranch, Carman, Man. Breeders of Oxford Down Sheep, improved Yorkshire Pigs & B. Leghorn Poultry. Stock for sale.

HENRY LAYCOCK, Rosebank, Man., breeder of Shorthorn Cattle and P. China Swine. Young stock of both classes for sale. Prices satisfactory.

W. F. PIEPER, Morden, Man. Pedigrees, Calling and Show Cards in pen work. Everything in the line of engraving. Send stamp for samples.

K. McIVOR, Roselea Farm, Virden, breeder of Shorthorn Cattle and introducer and grower of Western (or native) Rye Grass. Seed for sale.

W. C. EDWARDS & CO., North Nation Mills, P. Q. Importers and Breeders of Ayrshire Cattle Shropshire Sheep and Berkshire Pigs. 1642r

JOHN TURNER, "Bonny Brae Farm," breeder of Polled Angus Cattle. Young stock of both sexes for sale. Address, John Turner, Carroll, Man.

A. & J. MORRISON, Carman, Man. Breeders and importers of Shorthorns and Berkshires. I have a fine lot of young and old Swine for sale.

J. VAN VEEN, breeder of Galloway and Hereford Cattle and Shropshire Sheep, Lake View Ranch, File Hills, Port Qu'Appelle, Assa. 1588

R. M. WILSON, Marrinhurst, Man., breeder of Shorthorns. Red Knight 2nd [15563], herd bull, and young bulls for sale.

BRAMPTON JERSEY HERD. Full stock of A. J. C. Cows, Heifers and Bulls. Extra quality. B. H. Bull & Son, Brampton, Ont.

W. C. EDWARDS & CO., Rockland, Ont., Importers and Breeders of Shorthorn Cattle, Shropshire Sheep and Berkshire Pigs. 1643r

JAS. ROBERTSON, Beaver Brand Farm, Glendale P. O., Man. Poland China Pigs for sale from imported stock. Prices right.

ROBT. WHITE, Wakopa, Man., breeder of Shorthorns. Herd headed by "Crimson Chief" (24057) Young stock for sale.

L. A. BRADLEY, Portage la Prairie, Manitoba, breeder of Tamworth Pigs. Young Pigs for sale.

W. M. SMITH, Fairfield Plains, Ont. Ayrshires, Southdowns, P. Chinas, Duroc Jerseys, Poultry.

WM. CHALMERS, Hayfield, Man., breeder of Shorthorn Cattle. Correspondence solicited.

GEO. ALLISON, Burnbank, Man., breeder of Shorthorns and Leicesters. Stock for sale. 2481

STEEL BROS., Glenboro, Manitoba. Breeders of Ayrshire Cattle. Young Stock for sale. 1731f

JAMES STANCOMBE, Cartwright, Man., breeder of Shorthorns. Three choice-bred Bulls for sale.

THOS. McCARTNEY, Longburn, Man. Ayrshire Cattle, 4-yr-old bull David, & young stock for sale

MENZIES BROS., Shoal Lake, Man., breeders of Shorthorns, Oxford Downs and Berkshires.

JNO. S. GIBSON, Morden, Man. Shorthorns and Poland Chinas. Bull (22801) and Boars for sale.

WELLINGTON HARDY, Pomeroy, Man. Ayrshires and large Yorkshires. Young Stock for sale.

W. E. BALDWIN, Manitou, Man. Tamworth Pigs. Young stock for sale.

THOS. H. WEBB, Clearwater, Man. Breeder of Berkshire Swine. Correspondence solicited.

WALTER JAMES, Rosser, Man. Breeder of choice Shorthorn Cattle and Berkshire Swine.

GEO. N. HARRIS, Lynden, Ont. Breeder of reg. Berkshire Pigs. Young stock for sale.

JOSEPH TAYLOR, Fairfax, Manitoba, breeder of Shorthorn Cattle. Young stock for sale.

WM. HEDLEY, Oak River, Man., breeder of Leicester Sheep. Rams for sale. 2447

JAS. MURRAY, Breeder of Leicester Sheep. Young Rams for sale. Lyleton, Man. 1627f

GEO. RANKIN, Hamiota, breeder of Shorthorn Cattle. Stock always for sale. 2443

H. KINNEAR, Souris, Man., breeder of Shorthorn Cattle. Young stock for sale.

JAMES STRANG, Baldur, Man., has for sale two Pedigreed Shorthorn Bulls.

ALEX. WOOD, Souris, Man., Breeder of Oxford Down Sheep.

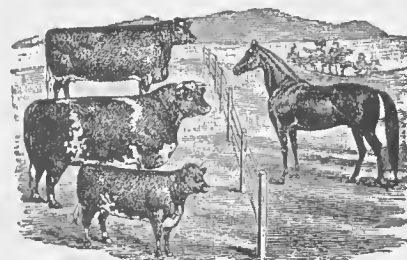
R. McLENNAN, Moropano P. O., Man.

Breeder and Importer of

SHORTHORN CATTLE.

I have on hand some fine young stock of both sexes for sale, including **Royal Duke** (24640), a dark red 3-year-old. Write for prices before purchasing elsewhere.

W. D. FLATT, Hamilton P. O. & Telegraph Office



OFFERS FOR SALE

22 CHOICE SHORTHORN BULLS

From three to fifteen months old. Persons requiring Show Bulls can be supplied from this bunch.

20 COWS AND HEIFERS

served by imported bull, Golden Fame, 26056. Farm six miles from Hamilton. Catalogue sent on application. Visitors met at G.T.R. or C.P.R. if notified. Prices consistent with quality. Inspection invited.

HOPE FARM,

ST. JEAN BAPTISTE, MAN.

Headquarters for GALLOWAY CATTLE.

Apply to T. M. CAMPBELL, Mgr.

JERSEY BULLS

FOR SALE.

I am now offering my stock Bull, **BELVEDERE STOKES PIGS**, for sale, also several young Bulls. Write for particulars.

WM. MURRAY, 2340 Dugald, Man.



TREDINNOK HERD

OF

AYRSHIRES.



Winners at the leading fairs of 1898. Awarded at Toronto, London and Ottawa—16 firsts, two sweepstakes, silver medal and other prizes, in all numbering 34, among which were seven herd prizes, four being firsts, and first for four calves, bred and owned by exhibitor.

ROBERT REFORD, Proprietor. **JAS. BODEN**, Manager. **ST. ANNE DE BELLEVUE, QUE.** 2458

THE HORSE.

Treatment of Pregnant Mares.

As the time of foaling approaches close attention should be paid to the mare's condition and particularly to see that her bowels are not constipated—in which case more laxative food—but not medicine—should be given. If the season be advanced so that it is thought advisable to have the mares foal on the pasture, good and well, although as a rule, it is preferable to have one or more good roomy box stalls where the mares may be put each night as the time for parturition arrives, says Alex. Galbraith, of Janesville, Wis. In the latter case it is proper to have a reliable attendant to watch the mare every night so that when the event happens he may be on hand to render any necessary assistance. As many mares are of a nervous temperament, and especially at this particular time, it is recommended that the stall be so constructed that the attendant can feed, water and inspect the mare without entering the stall himself, the object being to remove any exciting cause which might injuriously affect the mare at this critical time.

The principal duty of the attendant in the event of a natural presentation is to see

ly recommended that he stall be kept scrupulously clean and thoroughly bedded with bright clean straw. There should be no particles of manure or filth of any kind within reach, and care must also be taken to see that the attendant's hands are perfectly clean. As a further preventive, it is recommended that the navel cord be bathed at time of birth and twice daily for three days afterward with a solution of carbolic acid—say ten per cent. strength, or a strong solution of mercury. This application will almost invariably prevent blood poisoning and some of our most prominent breeders make a practice of using a substance called umbilicure on every colt at time of birth.

At a recent sale of Yorkshire Hackneys, owned by Tom Mitchell, a well-known breeder, a yearling colt sold for \$1,720 and a 3-year-old colt for \$5,550.

A farmer south of Pomeroy lately lost two good 3-year-old colts by leaving his granary door open and so giving the colts a chance to over-eat themselves on his seed wheat.

Horses keep advancing in price. What are you doing about it? Are you breeding your best mares to the very best stallion

spare a first-class mare for that purpose. The result too often is that they get pony or "plug" colts. It generally pays to breed from the best mares. In this, as in everything else, the best is none too good.

Speaking of the horse market the Breeder's Gazette makes the following pithy remark which is well worth the study of every horse owner: "Prices in a report before us range from \$5 to \$500. How is that for a 'spread'? They are all horses—animals with four legs and the ability to use them. What makes this vast difference in the price? Simply brains. One man took no thought in breeding and the \$5 horse is now the result. The other man studied and reasoned and produced the \$500 horse. Is \$495 of margin worthy of thought?"

A well-known veterinary surgeon of Montreal died lately and his will contained the following clause: "It is my wish and desire that a week after my death my three horses, Billy McKinley, Bushbolt and Felix, shall be put to death in the most painless manner possible. This is my desire, because I would be much grieved should the animals, after the affection and the care I have had for them, fall into the hands of people who would treat them cruelly or make them work or do anything which would make them suffer." Confronted by



Pure Bred Cattle at the Innisfail, Alta., Spring Show, held May 12th, 1899.

that the navel cords break at time of birth a few inches from the body of the colt. It may sometimes be necessary to cut this cord in which case it is well to tie what remains attached to the body with a soft string to prevent bleeding. Should a false presentation take place or, in other words, if the foal should be coming "wrong end to" or in any unusual or unnatural manner, it is well to secure the services of a veterinary surgeon or other skilful person to set matters right. The birth is usually a rapid process, however, and one of the attendant's very first duties is to assist the foal on to his feet and try to induce him to suck his dam. This done, the worst is over for the present, but for the first few days the condition of the foal's bowels should be closely observed, because neither diarrhoea nor constipation can be allowed to go on any length of time without serious and often fatal results. An injection of tepid water and soap is a safe appliance and many successful breeders make a practice of administering a tablespoonful of castor oil to every colt during the first twenty-four hours of its existence. This is the best of all lubricants and always safe.

But perhaps the greatest cause of mortality amongst foals is what is termed septicemia or blood poisoning. This is caused by the absorption of disease or filth germs by means of the raw navel cord at time of birth and to obviate this trouble it is strong-

ly recommended that he stall be kept scrupulously clean and thoroughly bedded with bright clean straw. There should be no particles of manure or filth of any kind within reach, and care must also be taken to see that the attendant's hands are perfectly clean. As a further preventive, it is recommended that the navel cord be bathed at time of birth and twice daily for three days afterward with a solution of carbolic acid—say ten per cent. strength, or a strong solution of mercury. This application will almost invariably prevent blood poisoning and some of our most prominent breeders make a practice of using a substance called umbilicure on every colt at time of birth.

An inferior mare bred to a good sire may drop a colt that will make a fair horse, but to produce the highest quality of horse, one that will bring the high price we all want, the mares must possess quality of a conspicuous degree as well as the sire.

Vol. XXI of the Clydesdale Stud-Book of Great Britain has just been issued. It contains the pedigrees of 180 stallions and 242 mares besides a long list of foals, transfers, etc. Arch. MacNeilage is the secretary of the Clydesdale Horse Society.

A western dealer is reported to have bought 2,800 unbroken horses and mules in the State of Utah at \$3.50 a head. He will travel them across country at a leisurely rate and break most of them to harness on the road. He means to market them in Kansas City, where the mules, 100 in number, will be worth \$100 a head when broken. Since this deal was made prices have risen \$1 a head.

With horses at the prices which have always ruled in this country there should be pretty fair satisfaction in raising horses. Yet how many are there who ever breed their really first-class able bodied mares? A good many think it is all right to allow a pony mare or some wornout "pelter" to raise a foal, but imagine that they cannot

this unusual clause in the will, the executors had no alternative but to obey and so the three valuable animals were taken out to the club house of the Montreal Hunt Club, behind Mount Royal, and there killed. It is said that the horse Billy McKinley refused to eat from the time he missed his late master.

Provide shelter from the sun. Never compel a sheep to stay in a pasture with no shade.

For some time the Montreal health inspectors have been complaining about the number of "lumpy jaw" cattle that come to the stockyards, and a determined effort has been made to stop it. An agreement has been arrived at between the city health authorities and the Dominion cattle inspectors regarding the steps to be taken to put a stop to the danger arising from shipping cattle affected with lumpy jaw to Montreal. When the Dominion inspector stops cattle having lumpy jaw from being exported he will send them to the abattoirs to be slaughtered under the supervision of the city health inspectors and the bodies disposed of as the city officials may decide. The Dominion Minister of Agriculture should make provision for closer inspection at points of shipment or else allow some compensation for animals slaughtered at Montreal.

CATTLE.**The Place of Live Stock in Farm Economy.***By Thistledown.*

The aim of this paper will be to show the advantages and profitableness, direct and indirect, of the combination of stock-raising and grain-growing; that stock should be handled in the faith that they are entitled to equal care with the other departments of the farm business, and that they can be relied on to pay well for that care, in direct cash returns, and indirectly in keeping the farm up to its best mark of profitable grain production.

An advantage in favor of this combination is the cheapness with which it can be conducted. Apart from the necessary labor of attendance on the stock, the running expenses are very small. The piles of straw that remain as a bye-product of the grain crop, and which would otherwise be burned, will provide the bulk of the ration, and this, with a small quantity of coarse grain, makes a good food to grow cattle on. Substantially no additional outlay is required for machinery above what is usually found on an ordinary grain farm. Nearly all the team work in connection with the stock comes in the winter, so that no extra outlay is required for horses. Here several of the advantages of the combination are apparent: 1. A waste product turned in part directly into hard cash and part returned again to the land in the shape of manure, to increase its fertility. 2. Profitable employment furnished in winter for a partially idle outfit, that would otherwise be running into debt.

In altogether too many cases where stock are kept in connection with grain-raising, Wheat is King and the stock attending is a bye-job. As soon as seeding time comes the care of the stock practically ceases. Again, in the fall of the year every nerve is strained to overtake the work in connection with taking off the wheat crop, and, with failing pastures, and in face of an advancing winter, the stock are left to fritter away the gain that has been cheaply made on summer pasture. Under such conditions it is not at all surprising that wheat should pay best. Very often, too, the cattle are not pastured on the farm, but are sent out to herd for the summer and left loose around the straw stack in winter; so that in a sense stock raising is a business on the side. What I would advocate is a fair partnership where both grain and stock get equal consideration and care, with buildings in which to house the animals during cold weather, and the necessary attention at all seasons of the year.

But some one cries out "That is too much work." I think not. The stock give profitable returns for judicious care in extra weight and quality; and, if so, surely it is only business common-sense to provide the labor. The grain farmer is not always afraid of unprofitable work. How many are working weedy, cropped out land every year, that makes plenty of work but no money?

The bulk of this work comes in winter time, when wages are low; besides a man can be hired by the year for a moderate sum per month, whereas, hired for short periods in the busy season, wages run up as high as \$35 per month; so that under a system of mixed farming it does not require a great deal more to keep help the year round. Under this system we will secure a better class of hired help. Who that has had much experience with hired help does not know the comfort of having a man who works the year round on the farm, identifying himself with all its interests, and getting thoroughly up in his work? I think almost

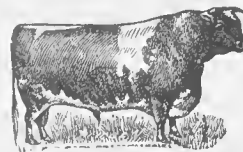
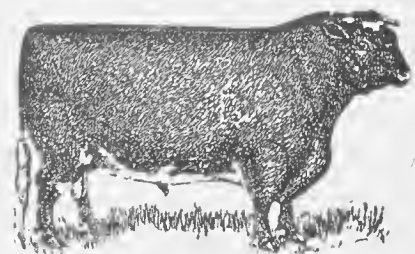
every farmer has had experience of the short period man, who is looking for snaps of pay, and snaps of idleness, and that experience is certainly not a comfort.

Exclusive grain growing, with its periods of high wages and periods of idleness, has a demoralizing effect upon a great many of our young men. Now, if we should cut down our grain acreage, some of the labor which is practically wasted in working worn-out land, might, with advantage, be partly applied to the care of the stock, partly applied in putting in the balance of the crop in better shape, and in cultivating to keep down weeds. So that, though the acreage would be reduced, still the total quantity raised may be pretty well kept up and the quality greatly improved. The old land given a few years' rest under pasture along with a top-dressing from the cattle stables, may be brought back to profitable production, and as prevention is better than cure, the land can be rested before it gets tired by seeding down to grass for hay and pasture. This will also go a good way towards keeping the land clean of weeds. It certainly seems poor policy for the grain farmer, who finds wheat a good paying crop, to kill the goose that lays for him the golden eggs. The best plan would be to keep the goose in good laying condition.

The adoption of a system of caring for the soil will foster and develop a pride in, and love of the land, which is largely lacking under present conditions. We find it a common practice to crop the cream out of a farm, then sell out and buy more virgin soil to undergo the same process of robbery. A common and a strong objection against stock raising here is that our long winters make it so expensive to fatten cattle that no profit remains. I admit that stall feeding cattle, say rising 3 years old, that have not been given good care, and that are put up to feed about December, when their owner gets time to attend to them, is not likely to return much profit. Indeed, the feeder may not succeed in getting them properly finished, as very often happens, then, between light weight, low price for low quality and a heavy feed bill, the profit gets badly squeezed.

It is right here that judicious care will save and make money. Cattle given proper care, as suggested, right on until the pasture is good enough to carry them ahead, will beat the neglected stock in both size of carcass and thickness of flesh. Continue that care right through the summer by seeing that plenty of water and grass are provided, for they come cheap, and full advantage should be taken of them. If you have some summer fallow, sow coarse grain thinly on it when it is cheap, or some rape. Turnips for later feeding should be sown broadcast on breaking, either prairie or timothy sod. Wherever rape is sown there should be some rough pasture handy to it, so that the cattle are not forced to eat all rape. On most summer fallows, when turnips are sown, the annual weeds being more rapid in their growth, the turnips are choked at the start. By this plan in most seasons a great amount of good food can be obtained at trifling cost, and will prove a benefit to the land.

Cattle can in this way be well and cheaply grown and fattened, and if intended for the spring market the business of fitting them for it is neither a difficult nor expensive one. Hence the care at the right time is well repaid. Barley, bran and shorts usually sell at country points at something like half a cent per pound, while butter in some country towns brings 20 cents per pound during the winter. Accordingly one pound of butter pays for about forty pounds of barley or mill feed. It would surely be an ungrateful cow that would not pay a profit on these terms. The pig, too, comes in as a good agent to turn by-products into good money. Skim-milk and buttermilk, small potatoes, grain cleanings, the gleanings of the grain fields, and even weed seeds, can

Marchmont Stock Farm.**SCOTCH-BRED****SHORTHORNS****12 Young Bulls for Sale**At moderate prices. Also **BERKSHIRE PIGS.**
TELEPHONE 10048.**W. S. LISTER, Middlechurch P. O.,**
(7 miles North of Winnipeg.)**J. E. SMITH.**

J. E. Smith has for sale a number of the very choicest Clydesdale Stallions and Mares, Shorthorn and Hereford Bulls, Shorthorn Cows and Heifers. All animals registered. Stock right. Prices right and no reserve.

J. E. SMITH, Box 274, Brandon, Man.**PIONEER HERD OF SHORTHORNS**

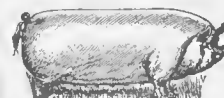
I have been breeding Shorthorn Cattle right here for over a quarter of a century. I breed my own Show Cattle, and last year had at the Winnipeg Industrial the Gold Medal Herd. First for Bull and two of his get, and first for Cow and two of her progeny. I usually have stuff for sale, and am always pleased to show it.

WALTER LYNCH, Westbourne, Man.**PLAIN VIEW STOCK FARM****PORTAGE LA PRAIRIE, MAN.**

The home of Shorthorns, Cotswolds and Berkshires. Watch this stock for something good.

F. W. BROWN, Prop.**PURE BRED AYRSHIRE CATTLE.**

Imported from Scotland, of the very best prize winning milking families, possessing large size, robust constitution, beautiful udders and large teats. Gold Medal herd from 1893 to 1897 at leading Canadian shows. Great prize record. Not been exhibited since. Choice Tamworth Swine—The bacon pig of the day. Stock all from noted prize-winners. Choice Collie Dogs—Imported and home bred. Won all leading prizes in Canada up to 1897, also second at New York Bench Show in 1897.

Stock all ages for sale.**R. G. STEACY, Importer and Breeder,**
1876 Box 720, BROCKVILLE, ONT.**OAK GROVE FARM.****SHORTHORN CATTLE**
and
LARGE, IMPROVED
YORKSHIRE SWINE

Orders booked now for Young Pigs. Among the Shorthorns recently imported from Ontario, I have for sale the 15 months old bull, Lord Lottie, and a few very fine heifers.

Timothy Seed.—A large quantity of pure, clean timothy seed for sale.**JAS. BRAY,**
Longburn, Man.

all be turned to profitable account by the pig.

To sum up, giving live stock an honorable place in the farm economy provides profitable employment the year round. In equalizing the labor it does away with severe rushes and promotes better work and less waste. The stock may not give boom returns as wheat occasionally does, but they give substantial and regular returns and will help you out when wheat knocked out by frost, hail or drouth leaves you in the hole. Then, under a proper system, they are contributing all the time to the building up of the soil, while wheat is working in an opposite direction.

This May Hit You.

In the face of all that has been said and written against the scrub bull, he still finds in a great many places a great deal of work left for him to do. In a community where there is no extensive breeder of cattle the average farmer generally hesitates before laying out a handsome figure for a bull and then having to maintain it, especially if he expects no support from his neighbors, and the consequence often is that not only does that man suffer from having to use an inferior animal, but the whole community also shares in the loss.

There is no denying the fact that the keeping of a good bull for public service in a good many localities is one of the most thankless of jobs. One of the best farmers in one of the best localities in Manitoba—a man who takes a leading part in any move toward stock improvement—told us the other day that he had almost decided to give up keeping a pure-bred bull, as so few of his neighbors were willing to patronize him and pay reasonably for doing so. A great many of them would rather pay fifty cents for the use of some nondescript scrub than expend \$1.50 and have their calves sired by a worthy beast. The result is that this man is so perfectly discouraged that he will not likely keep a bull, and there will not be a good one for use in the whole neighborhood this year. The result of such action can be nothing but disastrous. Plenty of other good farmers elsewhere would get good bulls if they were sure that two or three of their neighbors would stand by them in doing so.

Let every farmer help to encourage the men who have well-bred, well-kept bulls for public service. There is no fear of there being too many of them for the public good. The quality of unborn generations of cattle depends to a great extent upon this very point. The degenerating effect of a poor sire often requires generations of breeding to undo. Support the owner of a good bull—it will pay you to do so.

Close Season for Scrub Bulls.

A wag told The Farmer the other day that he intended to advocate a close season for scrub bulls. It was to extend from January 1st to December 31st. We would suggest that this period be an open season and that any person finding a scrub bull at large should have perfect liberty to shoot him.

One of the very last herds of the Longhorn breed of cattle, the breed on which Bakewell first tried his improving hand, was sold the other day in Leicestershire, England, where a few old style farmers have all along held on to them. Some of the cows sold had splendid udders, and one sold at \$220. Some specimens were last year shown at the Birmingham Royal Show, and this particular herd was in request because there is an intention once more to revive the breed and issue a herd book.

Good Blood.

Breeders of live stock in Argentina have set the world an example in stock breeding that is of more than passing interest to Canadian breeders. It is a lesson in the improvement of the common cattle of the country by the use of pure-bred sires. We all know, of course, that it can be done, but the Argentine breeders have "gone and done it;" that is the point. For years these men have been the heaviest purchasers of the best breeding stock in England, and The Farmer has frequently called attention to their purchases and the big prices which they willingly paid for choice sires. We have pointed out, too, that sooner or later the get of these bulls will come in competition with the steers from the Canadian ranges. The Mark Lane Express, of London, England, in a recent issue, states of the cattle market: "Some grand cattle from South America were shown." The same report states that the quotations for American cattle were 3s. 10d. to 4s. per 8 pounds, estimated dressed weight, while Argentine cattle were 3s. 6d. to 3s. 10d. According to this, the best American cattle were selling for only two pence more than the best Argentine for 8 pounds, dressed weight, or practically only one-half cent a pound less. This means competition, and no question about it. The Argentine breeders have spared no expense for good blood, and they are now beginning to reap a harvest which promises a return of many fold. Good blood will tell on the range and on the farm in Canada just as well as in Argentina, and must be used if Canadian beef is to hold a place in the English market. The Argentine breeders have set us a lesson that we will do well to follow.

Change of Feed.

Old hands at cattle raising have, as a rule, maintained that steers wintered mainly on straw make gains on summer pasture much faster than those more luxuriously fed. Perhaps one cause of this is that there is comparatively little nutriment in very young grass, and the change from the more liberal feed is on that account more readily noticed. Even where the change is for the better, there may be a great falling off. At the Iowa station twenty Shorthorn and Angus steers were turned from the feed lot to pasture, and although still given grain, made a daily gain of only 0.6 of a pound each day for the fifteen days, during which the gradual change was being made. At the same station, when changing a lot of steers back from pasture to the feed lot in the fall, there was likewise a gain of 0.6 of a pound per head daily during the 25 days in which the change occurred. Previous to making the change the steers had gained each two pounds daily on the pasture.

Prof. Henry says: "Avoid changes in fattening steers. The fattening steer is one of the most susceptible of farm animals and no other shows so quickly and positively the ill effects of changing conditions of almost any kind, provided the previous ones were fairly satisfactory."

A farmer at Elm Creek undertook to smoke the mosquitoes out of his stable the other day. Before the job was finished four horses, two cows and a calf were burned to death.

The Experiment Station Record shows that the Maine station fed milk from tuberculous cows to four pigs and fifteen calves. The pigs were killed when 175 lbs. weight and two of them were found tuberculous. The calves were fed till six to eight weeks old and two of the fifteen were tuberculous. This does not show a very serious influence.

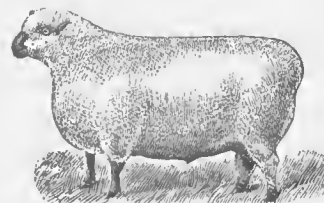
J. A. S. MACMILLAN

IMPORTER OF

Clydesdale, Shire and Hackney STALLIONS,

Has a few choice ones for sale; also

Pure Bred Shropshire Sheep.



Rams and ewes from the most fashionable imported blood. Inspection invited. For full particulars apply

2236

Box 483, BRANDON, MAN.

Prairie Home Stock Farm,

CRYSTAL CITY, MAN.



Shorthorn and Ayrshire Cattle. Shropshire Sheep.

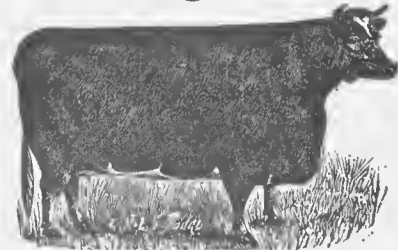
Yorkshire and Berkshire Swine.

Address all communications to JAS. YULE, Mgr.

2260

THOS. GREENWAY, PROP.

Choice Young Bulls for Sale.

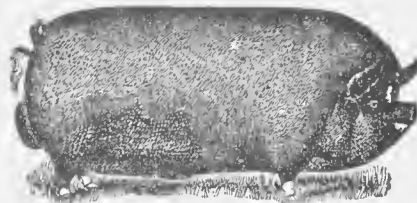


Sired by **TOPSMAN**, the champion Shorthorn Bull at Winnipeg in 1897, and **STANLEY 6th**.

Anyone wishing to obtain a bull possessing individual merit and of high breeding can make no mistake in writing

J. G. BARRON, Carberry, Man.

MAPLE LODGE STOCK FARM.



Large English Berkshires for Sale.

Sired by Perfection, Proud Victor, and Prince Higclere, out of such noted dams as Lady Bluff, Dina 4th, Maiden Lass and Lady Eaton; and a number of other large Sows. Spring pigs ready to ship, single or pairs not a ki. I have a few choice young Boars fit for service. Write for prices,

R. McKENZIE, High Bluff, Man.

WALNUT GROVE SHORTHORNS.

We are offering five Bulls from 7 mos. to 2 yrs. of age. Stock Bulls (imp) Warfare (56712) and (imp.) Royal George (17106), and Centennial Isabella, Scotland Yet (23375), also a few Heifers.

A. & D. BROWN, Iona, Ont.

As Others See Us.

Canada's greatest cattle-ranching districts are the Territories of Alberta and Assiniboia, N. W. T. Their borders inclose a country equal to the combined area of Great Britain, Ireland, Portugal, Denmark, Holland, and Belgium, it is said. Calgary, the central and principal of the ranching towns, is situated on the C. P. R. Although the town lies over 350 miles further north than Montreal the surrounding country forms one of the best cattle-ranching districts in America. Throughout the greater part of Alberta and Assiniboia the immense herds of horses, cattle, and sheep roam at will the year round. It is for the protection of the ranchers' stock that detachments of the Northwest Mounted Police are constantly patrolling the range of country. The troopers told off for the duty are called "range riders," and are generally billeted at various ranches. By a system of connecting patrols they visit every ranch at least once a year. They are constantly inspecting the cattle upon the ranges and any found infected with contagious diseases they promptly quarantine or shoot. They also act as hide inspectors and are ever on the watch for tampering with brands, and they bring to justice the cattle-killers and the horse and cattle thieves. — Breeder's Gazette.

It is said that a train load of Manitoba stockers bound for Macleod, when examined in transit, were found to have about 50 dead.

A farmer writes: "Our calves are three weeks old and learning to eat a little chopped grain." This is the right way to treat calves, and when weaning time comes they will go right on gaining.

In New Zealand, a beast has only to be pronounced tuberculous by an inspector and it is at once killed without any compensation to the owner, unless the beast happens to be found free of any trace of the disease.

Rev. John McDougall, of Morley, interviewed at Winnipeg, says that all the cattle in Manitoba to-day, and scattered throughout the Territories, are but a small thing compared with the herds of buffalo that were on the Saskatchewan plains 30 years ago.

The Kansas Experiment Station has under way an interesting calf experiment. A herd of 13 calves, varying in age from 3 weeks to 5 months, is divided, when fed, into two lots, one lot receiving fresh skim-milk from a hand separator, and the other sterilized skim-milk from the creamery.

Last month we noted the case of a cow at Morden that had five calves in twenty-four months. This, good as it is, was recently beaten in Nova Scotia. Frederick Hill, of Glenore, had a cow last year that had just produced five calves in one year and ten months. First year she had twins, second year one calf, and in the third year twins again.

Letter of Thanks.

Winnipeg, 19th April, 1899.

G. O. Woodman, Esq., Secretary-Manager
Northwest Fire Insurance Company,
Winnipeg.

Dear Sir,—I am advised by Mr. G. A. Muttelbury, of Winnipeg, that you have given him a cheque on my order in full payment of loss by fire on 6th Feb. last, amounting to \$350.00, and as I have received very generous treatment at the hands of your Company, I wish to take this opportunity of thanking you for the payment of my claim and for the liberal way in which the loss has been settled.

Yours truly,

Advt.) J. A. McGUFFIN.

SHEEP.

The Outlook for Wool.

As the season for marketing wool is upon us, it may be well to look into the conditions of the wool market at present and see what the outlook is so far as Western Canada is concerned. It is claimed that the outlook is anything but reassuring. The price at Winnipeg is 7c. a pound, the lowest it has ever been. Even this is higher than the market warrants, as when to this is added a duty of 12 cents a pound, freight charges, etc., it is almost impossible to sell it on the American market and clear anything. Prices in Ontario are the lowest ever known.

The cause of the exceedingly low prices is hard to place. Some say it is due to over-production of coarse wools, while others unhesitatingly attribute it to tariff changes. As the American market controls the Canadian one in this as in many other things, we must look to the other side for a cause. Under the low tariff of the Wilson Bill large quantities of wool, and particularly woollen goods, were imported. The Dingley Bill put on a heavy duty, but so large were the quantities imported that it will take a few years yet of high tariff to right the market. There is also a very large portion of the 1898 clip and considerable of that of 1897 is reported still unsold.

The only wool for which there is any active demand and for which prices are advancing is very fine wool. Some time ago The Farmer called attention to the advancing prices of fine wools and stated that it was due, or supposed to be due, to drouth in Australia, the source of most of the fine wool, but that other authorities pointed out it was not due so much to drouth as the development of the frozen mutton trade. The Australian ranchers had been breeding more or less pure Merino stock and only for wool. With the demand for mutton they have turned to the mutton breeds for sires, as the cross-bred lambs bring more money than the Merino ones, but do not produce as fine a wool. Hence there is a scarcity of the fine wools. Be this as it may, the present situation is anything but favorable for Canadian wool.

Enquiry among our sheep breeders shows that most of the wool was marketed at the larger towns last year at prices ranging from 8 to 12 cents per pound for unwashed wool. Winnipeg and Brandon take the largest amounts, though a large number of sheep raisers sent their wool to the Morden mills. Quite a large number shipped to mills in Ontario, and some sold to local dealers. When prices are as low as they are now it would seem that the best plan would be to exchange the clip for cloth at the local mills or else have it made up. The palmy days of 50 cents a pound for wool are past, and if present prices continue sheep-raisers will have to look for nearly all their profit from the mutton value of their sheep.

Do not allow lambs out in a rain storm soon after castration. They are liable to take cold and die.

According to Beunos Ayres reports, sheepmen in Argentina are discouraged by the low price of coarse wools, and are therefore dropping this kind of stock and returning to the fine wool sheep.

"The Modern Sheep" is the title of an admirable work of 264 pages prepared by F. D. Coburn, Secretary of the Kansas State Board of Agriculture, Topeka. It is full of practical information on sheep husbandry and will be a valuable addition to the three companion volumes already issued. "The Helpful Hen," "The Beef Steer and His Sister," and "The Modern Hog."

EVERY STABLE REQUISITE

Correspond with us if you require new or second-hand Carriages or Buggies of any description. New or second-hand single or double Driving or Work HARNESS, SADDLES, BRIDLES, RUGS, ROBES, BLANKETS, etc.

We have the largest and oldest-established Horse Market in Canada. Auction sales every Tuesday and Friday throughout the year. Private sales every day. Consignments solicited. Special terms made for car-loads.

WALTER HARLAND SMITH,

AUCTIONEER AND PROPRIETOR,

"Grand's Repository," Toronto, Canada.

Established 1856.

D. McBETH, OAK LAKE, MAN.

BREEDER OF

CLYDESDALE
HORSES



AND
SHORTHORN
CATTLE.



I have a number of promising young Stallions for sale.

My Shorthorn herd is headed by "Best Yet," bred by Hon John Dryden, of Brooklin, Ontario. A number of young stock of both sexes, all registered, are for sale, and can be recommended as first-class animals.

Correspondence solicited. Prices right.

R. REED-BYERLEY, Cook's Creek, Man., breeder
and importer of Clydesdales. Headed by Gem Prince, sired by Cedric. Correspondence solicited.

FOR HEREFORDS

CALL ON OR WRITE TO

J. E. MARPLES;

Poplar Grove Farm, Deleau, Man.
(Pipestone Branch C.P.R.)

J. C. & A. W. FLEMING,
PILOT MOUND, MAN.

Breeders of Cotswold Sheep, Poland China Pigs, Barred Rocks, and other breeds of poultry.

Growers of all the best varieties
of POTATOES. Seed for sale.

Send for Catalogue, and mention this paper.

50 REGISTERED BROOD SOWS

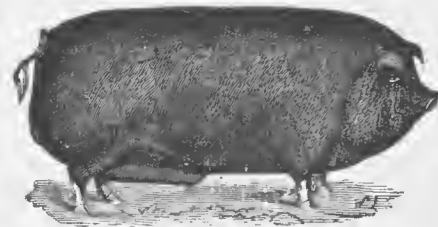
For sale in Berkshires, Yorkshires and Tamworths. A fine lot. Mated to farrow in May and June. Also some nice Boars. Close prices.

Caldwell Bros, Grand View Hotel, Dauphin, Man.

W. L. TRANN, CRYSTAL CITY, MAN.

Proprietor of Boundary Herd of

POLAND CHINA SWINE



Our herd are direct descendants of such noted hogs as Canada Wilkes, Guy Wilkes 2nd, M. P. Sanders, and the Tecumseh. Nothing but first-class stock shipped. Write for what you want; satisfaction guaranteed. Prices always reasonable. Nothing but choice sows kept for breeders. We are now booking orders for spring pigs of 1899. We have a few good winter pigs for sale. Write and describe what you want, and we will endeavor to treat you as we would wish to be treated.

Sheep-Raising in Manitoba.

Sheep husbandry is only in its infancy in Manitoba. The country is new and there are many things working against it, but wherever the "golden hoof" of the sheep has been introduced it has left profitable results. In many parts the wolves have been a great source of discouragement, but, in spite of serious ravages by them, the returns from the flock are such that no man wants to part with his sheep. With cheaper fencing and closer settlement more farmers will take up this most profitable line of farm work, as Manitoba is a fine country in which to raise sheep.

The Farmer sent out the following question to a large number of sheep raisers in Manitoba: "Have you found sheep raising a profitable line of farm work?" The replies to this question are most encouraging, no less than 35 per cent. answer simply "Yes," while 26 per cent. report "Very profitable, indeed," or, in all, 61 per cent. This is a splendid showing. Eleven per cent. say "Very profitable but for losses by wolves," and the same percentage of the answers report that it is not profitable now, but give no reason. Four per cent. "Yes, but not on a large scale," and the same percentage give a cold "No." Others report that the industry is not so good now because the price of mutton or wool is low, while others look forward to more profitable work than ever in the future. Despite the drawbacks to sheep raising, we think these are encouraging figures and that as farmers are able to securely fence their land, so that sheep can be kept where wanted, more of these useful animals will be kept.

The following comments gathered from the replies will make interesting reading:—

"Very profitable."
"Yes, more than cattle."
"One of the most profitable."
"Sheep return good interest on the money invested."
"Yes, I think every farmer should have a few sheep."

"They are the most profitable of all stock."

"I never had sheep do so well in Ontario as they do in Manitoba."

"Sheep are the best stock to destroy weeds and pack the land for a firm seed bed."

"Yes, very; with a good flock we can make 50 per cent. profit per annum."

"Yes, we have found nothing to give so quick returns for so small an amount of labor and costs."

"I consider they have paid me fairly well and the profit is obtained with less labor than required by any other farm stock."

"By far more profit on a few sheep than either grain or cattle, a quicker turn-over of capital."

"I have found small flocks pay best, and not over fifty in a flock. They pay better than any other kind of stock."

"Yes, I consider sheep raising very profitable in this country. I know of no part of Canada where it can be more so."

"I got wild mustard years ago in Hungarian grass, and although I pulled it every year it was not till I summer fallowed and had my sheep run on it that I got rid of it, for I have never seen any of it since, and that is nine years ago."

A noted exhibitor of sheep at Winnipeg says: "I consider sheep the most profitable stock on a farm; they are more easily fed, need less expensive buildings and are less trouble in every way than cattle, and are much more cheaply fed than pigs. I can raise a pound of mutton cheaper than a pound of beef and it usually brings a higher price."

There are "lions in the way," of course, but with a country so well adapted to sheep raising, and with so much cheap feed for winter keep we can see no reason why

more sheep should not be kept. In the states to the south of us large numbers of sheep are fed each year on the screenings from elevators. So far nothing of this kind has been attempted in Manitoba, with possibly the exception of a small lot at Emerson last winter. There is, however, a big opening here for our farmers and we commend it to them for careful consideration, as sheep will convert the screenings of our wheat into a cash product more economically than any other animal. Neither will there be any danger of finding weed seeds in the manure.

Dip the sheep, especially the lambs, at shearing time.

The flock should be brought to the barn at night, until the ground becomes thoroughly warm and dry.

High lands and pure water are the things for sheep; no foot-rot on the first nor internal parasites in the other.

An expert shearer in the large shearing sheds at Casper, Wyoming, sheared 250 sheep with a power machine in one day.

Sheep are inveterate lickers of salt, and it is conducive to their general health. Next to grass, there is hardly anything more essential. It is cheap; put it where they can have it at will.

Duncan Sinclair, Oakville, says that he has found that a bell on every sheep protects them from wolves. An American sheep breeder, who is troubled with wolves, has found that a good loud-sounding bell on every sixth sheep gives freedom from wolves.

SWINE.

Bone and Muscle in Pigs.

Bacon curers want a long side, and to get these long sides hogs having good strong bone are required, and as packers are willing to pay for the bone, growers should feed to develop it. Where pigs are being forced along rapidly, especially if confined, they should have access to a box of wood ashes, charcoal and salt. Let them eat what they want of it. Some successful hog raisers feed bone ash or ground bones. Theo. Louis, the noted hog raiser of Wisconsin, always uses the following mixture, which he calls his condition powder: Take six bushels of charcoal, the finer and smaller pieces into which they are broken or mixed with the dust of coal the better it will be; put them in a large box or on a floor, and add one to one and a half bushels of wood ashes (hard wood) and six pounds of salt. Mix this thoroughly. Then dissolve one and a quarter pounds copperas in a large pail of hot water, sprinkle this on the above with a sprinkling pot, but be sure to mix as you sprinkle so as to evenly distribute it. Place some of this mixture in a box where the hogs can have access to it, but so that they cannot upset it. It will tell its own story, and once used no feeder will be without it.

Breeders of early litters of pigs in many parts of the States have been heavy losers of young pigs. The unfavorable weather is blamed for this, particularly as many breeders have not comfortable enough quarters for young pigs when unfavorable weather comes.

The American hog market shows a great falling off in receipts, and supplies of pork and lard are rapidly diminishing. Farmers are not marketing their hogs as rapidly as the packers would like, although prices are good. It is thought that the unfavorable weather is keeping back supplies. On the

WOODBINE FARM, CARBERRY, MAN.



AYRSHIRE CATTLE.

YORKSHIRE SWINE.

S. L. WYANDOTTES

Am booking early orders for spring pigs, and can spare a few choice brood sows. The foundation stock of both swine and poultry is from imported stock. Birds properly mated at reasonable prices. Eggs \$2 per 13.—S. J. THOMPSON & SON, Box 28.

GOLD STANDARD HERD OF REGISTERED BERKSHIRES.



Are still to the front. I am now booking orders for spring pigs sired by my two noted boars "Fitz Lee" (an 800 lb. hog) and "General Booth," and from a grand lot of sows of the choicest breeding. Two litters farrowed in January, and sows due to farrow every month. Unrelated pairs supplied. Correspondence solicited. Address—

J. A. MCGILL, Neepawa, Man.

Thorndale Stock Farm

JOHN S. ROBSON,
MANITOU, MAN.

Breeder of SHORTHORNS. Long established, reliable pedigrees; straight dealing always. Young stock of both sexes always on hand. Write early if you want them. 2185



ALEX. D. GAMLEY

Breeder and Importer of high-class

LEICESTERS.

Some fine young stock from prize winners for sale. Order early.



Box 193, BRANDON.

T. GOSNEY, Miami, Man.

Breeder and importer of Registered

BERKSHIRES.

25 spring pigs, both sexes, and 6 young sows, fit to breed. My stock are from the best known herds and strains to-day in the Dominion or U.S. Call or write.

Ridgewood Stock Farm, Souris, Man.

WM. SHARMAN,

BREEDER OF

High Class Herefords

A few early Bull Calves for sale.

Well Graded SHIRE HORSES

For sale. Also light blooded stock. Cross S brand, graded with imported stud since 1884. Apply to—

P. S. DOWSON, Miles City, Montana, U.S.

JERSEY BULL FOR SALE.

No. 50202. 2 years old in February. Solid color, black tongue and switch. Took 1st prize in Winnipeg as calf.

H. R. KEYES, Midway, Man.

HOLSTEIN CATTLE. YORKSHIRE PIGS.

One 9 months Bull Calf for sale, of good dairy strain. Young Pigs now ready for delivery.

A. B. POTTER, Montgomery, Assa.

other hand in Ontario the price of hogs has dropped so low that farmers are dropping out of raising so many hogs. The wise men will stay with the hogs and have an extra supply ready when prices rise again.

Fattening Heavy Hogs.

The other day we were looking at a bunch of hogs that were just ready for the packers. The owner wanted to carry them on until they would weigh 300 lbs. before he considered they were ready for market. It was pointed out that the younger the animal could be marketed the lower would the cost of the gain be. It was difficult to convince him that this was so, and as there may be others of the same opinion, we quote from that admirable work of Prof. Henry's, "Feeds and Feeding," which we recommend to every stockman:—

"At many of our stations records of weights and gains of pigs and feed consumed by them have been so reported as to permit studies concerning the influence of increased size and weight of the animal on the consumption of feed. All of the available data from trials of this character conducted in this country up to the time of going to press enter into the composition of the table given below. In compiling this table six pounds of skim-milk or twelve pounds of whey are calculated as equal to one pound of grain according to the Danish valuation of these articles. For convenience of study the data are presented for each period covering fifty pounds of growth, the actual average weight of the pigs, however, being given for each division:—

Weight of Pigs (in lbs.)	Actual average weight.	Total No. of animals fed.	Average feed eaten per day.	Feed eaten per 100 lbs. live weight.	Average gain per day.	Feed for 100 lbs. gain.
15 to 50 . . .	38	174	2.23	5.95	.76	293
50 to 100 . . .	78	417	3.55	4.32	.83	400
100 to 150 . . .	128	495	4.79	3.75	1.10	437
150 to 200 . . .	174	489	5.91	3.43	1.24	482
200 to 250 . . .	226	300	6.57	2.91	1.33	498
250 to 300 . . .	271	223	7.40	2.74	1.46	511
300 to 350 . . .	320	105	7.50	2.85	1.40	535

"We learn from the table that from 105 to 495 pigs were employed in calculating each line of data. The number of trials furnishing the data varied from 19 to 119 and were conducted by from three to thirteen experiment stations."

These tables embodying the results of so many experiments and at so many different experiment stations, both in Europe and America, show plainly that the greatest gain is made when the pigs are young.

A country magistrate undertook the other day to settle a dispute between two of his cows. One of them disputed his jurisdiction and tossed him out of the way with her horns. The first round settled the case—at least we have not heard of any appeal from the cow's decision.

The state Agricultural Station of Nebraska is making a test of the value of Brome grass for that section. To 33 farmers, who undertook to test it on as many different varieties of soil, 75 lbs. each of the seed were sent out. A careful selection was made from a large number of applicants and those selected were bound to carry out the tests as directed and report the results with care and accuracy. This seems a better plan than ours of giving only three lbs. to all who apply. There must be something amiss with either the soil or seed down there. The instructions are to sow the whole 75 lbs. on one acre and a half. Here the same quantity of sound seed would do for three times that area.

That Well.

When was your well cleaned out? How has it been covered for the last year or two? Perhaps the skeletons of a few stray chickens of last year's brood are in the bottom of it. Gophers may have perished there last summer and though mere bones are less unwholesome than decaying flesh, it would be nicer to have a clean bottom from which to draw your summer's water supply. When you do start the job bear in mind that there may be a foot or two of carbonic acid gas in the bottom, which is deadly poison. Lower a lighted lantern to the water, if it burns clear the well is safe to work in. If the light burns dim there is gas and the simplest way to get it out is to let down an open umbrella by the handle till it touch the water, then haul it up, and pour out the contents of that empty umbrella, away from the mouth of the well. In this way most of the heavy and poisonous gas can be drawn up, and the well made safe to work in. But try it again with a light to make sure.

Perhaps that well has begun to gather the seepage from the yard and has in it a store of typhoid germs. For that mere cleaning out is no sufficient remedy. A new well should be dug on a clear spot some distance off and the old one filled up. It comes cheaper than a funeral or two.

Experiments in Plowing.

At the Red River Valley (Minn.) Experiment Station experiments have been made in cropping new breaking without back setting, with back setting in the fall, and also in the following spring, says an exchange. The experiments were conducted on plats, and cannot as yet be regarded as having positively demonstrated the value of the various methods, but they are interesting as far as they have gone, and are certainly pointers that deserve consideration. A plat cropped to wheat without back setting yielded 294 pounds; an adjacent plat of the same size, that was backset the spring after breaking, yielded 380 pounds; while another, broken in the early spring and backset the following August, yielded 550 pounds. The last was much less weedy than the other plats, and the land was in better tilth. There could have been no difference in the sods of the respective plats, and hence the conclusion is forced that difference in methods must be largely if not entirely responsible for the results noted. And if method is such a vital matter how necessary it is that farmers be close and persistent students of the mysteries of their profession. It should be added that experiments with oats, barley and rye produced practically the same results.

Wide tires are better than narrow ones because they keep the roads in better condition, don't cut up the fields so much, are not liable to kill out a crop, run just as easy on smooth roads and a great deal easier on bad ground.

It has been computed that there will be over 1,000,000 living seeds in a pound of good timothy seed, or about 25 per square foot if sown on an acre of land. The lowest amount of seed we have heard of here was 3 lbs., and seed catalogues generally prescribe from 10 to 20 lbs.

In an address before the Farmers' and Dairymen's Association, of New Brunswick, Pro. J. W. Robertson said: "The first essential to a fruitful soil was to have plenty of humus or organic matter. We must have that to assist in holding moisture and to assist in nitrification."

SHORTHORN COWS and HEIFERS.

The undersigned is selling out his herd of Shorthorns, and has still on hand 3 Cows, 2 with Calf at foot, and 3 Yearling Heifers. These animals have mostly been prize-winners at the local Fair, and are all good specimens of the breed. Cause of selling—no pasturage.



ROBERT SCOTT, Neepawa, Man.

Persiatric Plant Spray

The most effective and highly concentrated Spray in the market. Has successfully coped with the dreaded San Jose 'Scale,' and quickly destroys all orchard and garden pests, such as grubs, worms, brown rot, fungi, etc. Contains no mineral poisons such as arsenic or Paris green. Thoroughly reliable.

Persiatric Sheep Dip

The only remedy that will positively cure Scab in sheep. It is also invaluable for the cure of Skin Diseases in cattle, such as bruises, sores, ringworm, gangrene, shear cuts, and for ridding them of vermin. Widely endorsed by the leading stock-raisers of Canada as the best preparation of its kind in the market. Try it.

Persiatric Pig Wash

This preparation acts most satisfactorily on the stubborn Skin Diseases in swine. Has a soothing, healing influence, healing sores and eczematous diseases, and rids the animal of vermin. It acts as a tonic on sickly, depressed animals. Used a week or so before slaughtering, it makes a handsomely dressed animal for market.

Persiatric Horse Wash

This is a preparation of highly-concentrated curative qualities for the curing of Skin Diseases, and for killing all vermin in horses and cattle. Cures Scratches, Mange, Ringworm, Grease, Eczema, Urticaria, etc. Heartily recommended by horse breeders and leading veterinary surgeons.

You cannot afford to experiment where the health of your live stock is concerned—get the best. The Persiatric goods are the standard for PURITY and STRENGTH. At your dealers, or direct from the manufacturers—

THE PICKHARDT RENFREW CO.,

Limited,

Stouffville, Ont.

WINDMILLS.

Sure Investment

By buying

A CANADIAN

STEEL AIRMOTOR.

Will
GRIND YOUR GRAIN,
CHOP YOUR FEED,
PUMP YOUR WATER,
Etc.



No other Machine on the Farm or Home will yield better results.

ONT. WIND ENGINE AND PUMP CO., LTD.

Atlantic Ave., Toronto, Ont.

MANITOBA AGENTS: THE BALFOUR IMPLEMENT CO., WINNIPEG.

When writing mention The Farmer.

Among the Breeders.

Jas. Phipps, Manitou, has sold his stallion, Sandy Parks, to John Ewen, Morden.

John Lahmer, Carrville, Ont., has sold his entire herd of Berkshires by auction. He has also sold his farm and is retiring from breeding stock.

John Beggs, Pioneer Stock Farm, Clare, Assa., has a Shorthorn cow that dropped a bull calf that as soon as it was dry, balanced the scales at 114½ lbs.

Thos. Speers Oak Lake has sold a pair of excellent young bulls to J. E. Ingram, De Winton, Alta. They were Royal Duke, 14 mos. old, and Oak View Chief, 13 mos. old.

The American Tamworth Swine Record Association is in a prosperous condition and the Tamworth is gaining in favor throughout the United States. The new president is Edwin O. Wood, Flint, Mich., and secretary, E. N. Ball, Hamburg, Mich.

James Robertson, of the Beaver Brand Farm, Glendale, reports the sale of Poland Chinas as follows: A couple of boars to W. F. Sirrett M.P.P., and Samuel Rodgers, both of Glendale, and a sow to Robt. Burns, of Neepawa. He has now on hand a couple of well-turned, strong young boars, just fit for service.

D. Hysop & Son, Killarney, Man.: "We beg to report the sale of three Shorthorn bulls to ranchers at Medicine Hat. The ranchers said they were the best bulls that have come into the district. So well pleased were they that orders for 16 for next spring's delivery were placed with us. The management of our stock is in the hands of E. Hysop, who is an enthusiast for good stock and who is going to make a success of his work."

A.B. Potter, Montgomery Assa., writes: "My stock of Holstein cattle and Yorkshire pigs came through the winter in grand shape. I have sold my three year old bull, Gretique Montgomery Prince, the diploma bull at Brandon, 1898. I have one young bull yet. A number of enquiries for heifers. Three sows raised 20 pigs. Brampton Maid has a litter of 10 grand ones. A good demand for pigs. A number of sales to different parties."

Macqueen, one of the greatest Clydesdales that ever crossed the Atlantic, has just been sold by the well-known Wisconsin breeder, R. B. Ogilvie, to Graham Bros., Claremont, Ontario, who imported him over ten year ago. Macqueen is now 14 years old, but that don't count on a horse of the best quality. His sire Macgregor is still alive and active and it is to be hoped that Macqueen will be able to leave more colts on this side of the same high quality as he left in the States. His sire Macgregor, the greatest son of Darnley, was foaled in 1876, and is therefore now 23 years old.

J. S. Robson, Manitou, writes: "My stock are doing well. Our young stock bull, Bismark, is going to make a good strong one. Mr. Yule tells me the young bull calf, Royal Judge, which I bought from him, is doing well. He is to stay at Prairie Home for some time yet. The following is a list of sales since last report of last year's calves:—One bull each to James Jones, Pheasant Forks, N.W.T.; George Kerfoot, Crystal City; George Nairn, Manitou; G. J. Robins, Miami; J. C. McFarland, Snowflake; Peter Stewart, Manitou; George Nelson, Morden; Ed. Rooney, Manitou; Moore & Horrell, Cartwright; and two bulls to J. & W. Inglis, North Dakota. Henry Laycock, Rosebank, gets two heifers, and John Sol-

tim, Kaleida, Man., gets one. I have quite a number of females I will sell and a few bulls."

The Dominion Live Stock Association have sent west another carload of stock for western breeders. The following breeders get stock:—T. Bradford, Stonewall, Man., a Yorkshire sow, from Wm. Home, North Bruce, and another from J. E. Brethour, Burford; J. T. Patterson, Calgary, Alta., a Shorthorn bull, from Geo. Douglas, Cargill; Chas. Michie, Calgary, Alta., a bull from John Watt, Elora; G. H. Breadcock, Yorkton, a Clydesdale filly, from J. M. Gardhouse, Highfield; R. Linton, Hargrave, Man., a Clydesdale mare from Jas. Russell, Richmond Hill; L. Jickling, Morden, Man., a Tamworth boar, from Fred. Row, Belmont, Ont.; A. J. Shaw, Cochrane, Alta., a Shorthorn bull, from Ed. Shaw, Malton; W. J. Dodd, Innisfail, Alta., a Cotswold ram, from Wm. Willis, Newmarket; Wm. Lumsden, Hanlan, Man., a Jersey bull, from R. Gibson, Delaware; J. A. Carswell, Penhold, Alta., a Shorthorn bull, from Chas. Calder, Brooklyn; John Turner, Calgary, a Shropshire ram, from Hon. John Dryden, Brooklyn; H. Kipp, Chilliwack, B.C., a Jersey heifer, from Mrs. E. M. Jones, Brockville; T. O. Davis, M.P., Prince Albert, three Shorthorn bulls, from L. Burnett, M.P., Greenbank; one Shorthorn bull each to Rev. John McDougall and George McDougall, Morley, Alta., from John Bright, Myrtle, Ont.

Jas. Yule, manager for Hon. Thos. Greenway, Crystal City, writes: "I have been so busy since bringing up my last shipment of stock that I have not had time to tell you about them. Altogether I think they were the best shipment I have made to Prairie Home. It consisted of 13 head of cattle, one horse and a number of pigs. The horse is the Clydesdale stallion, Young MacMaster, 2509, and was bought from Thos. Russell, Exeter, Ont. The cattle purchased were Shorthorns and Ayrshires. Among the Shorthorns were River Side Stamp II, 27,658; Medora of River Side 2nd, Vol. 15; Bracelet 8th, Bracelet 9th; Jane Grey 5th, and Jane Grey 6th. These were all purchased from Thos. Russell. The balance of the Shorthorns came from W. D. Flatt, Hamilton. They were the cow, Lady Jane, imp. by John Isaac last fall; the cow Alvira 21st, 28,935; and the cow Isabella Stanley, 27,779. The Ayrshires were purchased from W. W. Ballantyne, of Stratford, and two from N. Dymont, Clappison's Corners. Those from W. W. Ballantyne were Stylish Denty, 2036, imp. in dam; and Missie of Neidpath, 2635. The pair from Mr. Dymont were Ruby of Hickory Hill, 3366, and Pearl of Hickory Hill, 3365. The shipment also contained a Berkshire boar and sow from Thos. Teasdale, Concord, and a Yorkshire sow from D. C. Flatt, of Millgrove. The cattle in this shipment are of excellent quality and breeding and will compare, I think, favorably with anything in the province.

"We have made quite a number of sales lately, some of the principal ones being: Gem of Athelstone, the Winnipeg Sweepstakes heifer in '98, to Capt. Thos. E. Robson, Ilderton, Ont.; and River Side Stamp to Mr. Allison, of Roland. This animal will head the herd purchased some time ago by Mr. Allison. John G. Barron, of Carberry, has bought the bull calf, Judge II. Thos. Smallcomb, Crystal City, takes the yearling bull, Manor Victor, and Roderick Craven, Pierson, the yearling bull, Dashwood Chief. An important sale was made to Purvis Thomson, of Pilot Mound. He gets Bridal Belle, 2nd in the three year old class at Winnipeg last year. She has gone on well and no doubt will be heard of again. Mr. Thomson also takes the yearling heifer, Crimson

Cloud, this is a good one with few equals. A large number of sales of Ayrshires, sheep and pigs have lately been made, but I think I have been lengthy enough without mentioning them. Sales continue brisk. It is the present intention to bring out another carload in June from Ontario and arrangements are now being made for an importation from Scotland in the fall."

ORDER YOUR SEEDS NOW.

Our new Catalogue, which is sent you for the asking, tells you all the very best varieties for growing in Manitoba.

They are just as cheap as Eastern seeds, and produce more.

Send us your name.

**FLEMING & SONS,
BRANDON, MAN.**

MORDEN WOOLLEN MILLS

THE BEST WOOL MARKET
IN MANITOBA.

We are open to buy all the long Wool offered.

WRITE FOR PRICE LIST.

When buying Stocking Yarn, ask for and get our Yarn.

Every Skein
labelled
with this
Trade Mark.



PEEL'S Horse & Cattle Food

THE GREAT BLOOD PURIFIER?

Will do your stock more good than any condition food on earth. Hundreds say so. If your dealer does not keep it, write

R. H. PEEL - WINNIPEG.

WINNIPEG BUSINESS COLLEGE.

Write for our new Annual Announcement and College Journal.

Business Practice a special feature of our course.

No entrance examination required. Students may enter any time.

G. W. DONALD, Sec'y.

F. TORRANCE, VETERINARY SURGEON

Graduate of McGill University. Diseases of animals treated scientifically. Surgical and dental operations a specialty.

Office: 214 James St., Winnipeg.
Telephone 295.

PROGRESSIVE, PUSHING PEOPLE

Demand up-to-date railroad train service. Two fast trains leave Minneapolis and St. Paul daily via Wisconsin Central Lines for Milwaukee, Chicago and Eastern and Southern points, elegantly equipped with Sleeping, Dining, Cafe and Parlor Cars. Ask your nearest ticket agent for further information.

JAS. C. POND,
Gen'l Pass. Agent, Milwaukee, Wis.



Answers to Questions.

By an Experienced Veterinarian.

As it is desired to make this column as interesting and valuable as possible to subscribers, advice is given in it free in answer to questions on veterinary matters. Enquiries must in all cases be accompanied by the name and address of the subscriber, but the name will not be published if so desired. Free answers are only given in our columns. Persons requiring answers sent them privately by mail must enclose a fee of \$1.50. All enquiries must be plainly written, and symptoms clearly but briefly set forth.

Milk For a Foal.

New Subscriber, Rathwell: "Would you kindly tell me how I am to rear a colt which the mother will not have near her? How much cow's milk should it get at one time and how often should it get sugar in it, and how much? Should it get any grain as soon as it will eat it, what kind and how much?"

Answer.—The milk of a mare differs from cow's milk chiefly in containing twice as much sugar and only about half as much casein, and it is richer in butter fat than the average cow's milk. To render cow's milk suitable for rearing a young foal then we should dilute it to lessen the proportion of casein, and add cream and sugar to increase the quantity of these ingredients. In actual practice it is found sufficient to add water and sugar to good ordinary cow's milk. To each pint of milk add half a cup of water and a teaspoonful of sugar. This should be warmed to blood-heat and when the colt is new-born given about every two or three hours for the first few days. Then increase the interval gradually so that when the colt is a month old you need feed him only three or four times a day. As soon as possible get him to eat grain beginning with a little oatmeal taken from the hand, coaxing him along until he will eat whole oats.

Accidental Rupture or Hernia.

Subscriber, Lariviere, Man.: "I have a colt three weeks old. While running around yard a week ago, it fell heavily on its side, made several attempts to rise before succeeding. Each time its hind legs spread wide apart. Since then there is a soft lump between the legs which disappears when pressed gently with hand. Please let me know what to do for it."

Answer.—Your colt has become ruptured through the accidental fall. I would advise you to do nothing for it at present without consulting a veterinary surgeon. The danger from the rupture is no greater than that of an operation for its relief and as the colt is so young there is a probability that the rupture may disappear as he grows older. If not the operation for the relief of the hernia can be performed at the time when he is castrated.

Sterility.

C. W. R., Katepwe, Assa.: "I have a cow that calved last June and has not come in season since. Can you tell me any reason for same, and the remedy?"

Answer.—As the cause of this condition is unknown, it is difficult to advise a remedy, but it may be of assistance to you to state the fact that sterility frequently arises from defective general health in the animal. Probably the most frequent

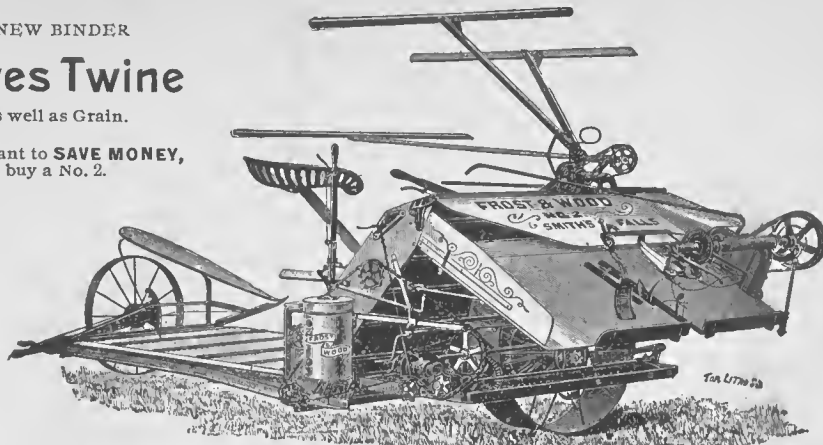
TWINE IS MONEY!

OUR NEW BINDER

Saves Twine

as well as Grain.

If you want to **SAVE MONEY**,
buy a No. 2.



The Frost & Wood No. 2 Force Feed Binder will WASTE LESS GRAIN at the top of the elevator while cutting an entire harvest than any other Binder will waste in baling one acre. The Eccentric Wheel on the Frost & Wood Binder gives a gain of 16 2-3 per cent. in power when the hardest work is being done.

Get our Illustrated Catalogue and see samples of our Machines before placing your order for the coming harvest.

THE FROST & WOOD CO., Limited, WINNIPEG

cause of all in cows is a condition of excessive fatness. The ovaries become imbedded in such a mass of fatty tissue that their function is interfered with and they do not produce ova. If you suspect this to be the case the remedy consists in reducing the feed and increasing the exercise. This can be effected by placing the animal in a bare pasture where she will have to walk about considerably to find enough to eat. Another cause of sterility is lowered vitality the result of hardship, exposure and insufficient food.

An Unnatural Mother.

R. T., Umatilla: "Would you kindly inform me what is wrong with my pig. She has just had a litter of young ones, and would not let them go near her. I took them away for two hours and then gave her them again. She would have worried them had I left them with her. She had always been very quiet and kindly until the day before she farrowed, when she got very cross."

Answer.—The only thing wrong with your pig is a want of natural affection for her offspring, a defect not infrequent in swine. They have been known to actually devour their young ones. The only remedy I have known to be effectual is the butcher knife.

Lumpy Jaw, or What?

Farmer, Langenburg: "Cow calved about a year ago last fall, two or three days after drank a lot of cold water, and after this a lump came on upper right hand jaw. In warm weather lump is stationary, but with cold spell it becomes larger. What is the cause of this? Lump keeps breaking and running matter and blood, with bad smell. Is this lumpy jaw? What is best course to pursue, viz. kill or can it be cured? Presume milk is dangerous? Is it contagious?"

Answer.—The symptoms you describe are not sufficient to base a positive diagnosis of lumpy jaw upon, but most likely that is what is the matter, and unless you can get a V.S. to examine the animal, I would advise you to treat her for that disease. If you find lumpy jaw treatment does not cure, you had better fatten her for beef. The disease is a local one and other parts of the carcass will be wholesome food, milk included.

DON'T TRIFLE WITH LUMP JAW.



Lump Jaw is an infectious disease. One case may infect a whole herd, or distribute the germs of disease over your pastures. Rely on

Fleming's Lump Jaw Cure

to stamp out the pest as soon as it appears. This remedy originated in Prince Albert, N.W.T. It has cured thousands of cases, and is endorsed by the leading ranchers and shippers of Canada.

DON'T LOSE TIME OR WASTE MONEY

The success of FLEMING'S LUMP JAW CURE has led to numerous imitations. Do not be imposed on by them. The labels and circulars can be imitated, but the Cures cannot. Get the genuine, and be sure of results. Money promptly refunded if the remedy ever fails.

PRICE \$2 a Bottle.

Can be sent anywhere by mail.

FREE—A concise, illustrated treatise on the origin and cure of Lump Jaw. Address:

FLEMING BROS., Chemists,
St. George, Ont.

BRANDON PUMP WORKS.

H. CATER, PROP.

Successor to J. M. Reisberry

Better than Klondyke Gold: A GOOD PUMP

that will not freeze in winter.

We make a specialty of large Pumps for watering cattle—5-inch bore iron cylinder, porcelain lined.

All kinds of Pumps repaired. Office and Factory, Ninth St., opposite Northern Pacific Station.

Address—H. CATER,
Brandon, Man.

Write for Prices.

Agent for Myer's Pumps with brass lined cylinders and glass valve seats

When writing mention The Farmer.

Nasal Gleet.

G. C., Hamiota: "Will you please tell me what is wrong with a young mare, three years of age. She has a discharge at the right nostril. It is of a light color, generally thick, but is sometimes like water. I first noticed it winter before last. I thought she might have caught a cold by being out in a cold rain in the fall. She has a very bad breath in fact, I noticed the bad breath from the first. She is all right in every other way. I am working her all the time, she is in good condition. Is it catarrh? Can it be cured?"

Answer.—You should have your mare examined by a V.S. as soon as possible. Most likely there is disease of the maxillary or facial sinus, and if so, the one affected will require to be trephined and the pus washed out in order to effect a cure. The maxillary sinus is a large cavity in the bones of the face just above the roots of the three back molar-teeth. This cavity is lined with mucous membrane like the nasal passage and communicates with it by a small opening at the upper part. The sinus in a healthy horse contains nothing but air, but if the lining membrane becomes diseased, mucus and pus will collect in it and overflow down the nostril, causing chronic nasal discharge or gleet. Frequently this disease of the sinus arises from an ulcerated tooth, the root of which lies in the floor of the sinus, but a veterinary surgeon will after examination, be able to locate the source of the discharge and adopt measures for curing it.

To Protect From Flies, Mosquitoes, Etc.

C. E. Nairn, Silver Creek, Man.: "Is there any preparation sold which, when sprayed or applied to horses and cattle, will keep off mosquitoes and flies? If so, would you kindly furnish me with particulars as to price, etc., and where I could get it?"

Answer.—Many preparations have been lauded for the purpose of preventing the attacks of flies, but I have never known one that had not some objection to its use. Some are too expensive, some require to be applied more often than convenient, and others mat the hair and spoil the appearance of the animal. Probably the least objectionable as well as cheapest are kerosene emulsion, and creolin solution, but both have the defect of remaining effectual for only a day or two, and must be re-applied almost daily. Kerosene emulsion is made by boiling 3½ lbs. of whale oil soap in half a gallon of water and then adding a gallon of kerosene gradually while stirring vigorously. When cool a jelly like mass results, and this is diluted for use with seven times as much water and applied with a spray pump. Creolin solution is composed of creolin and water (2 or 3 per cent.) and applied in the same way.

Rinderpest or Cattle Plague.

J. G., Yorkton: "Would you kindly give a description of the plague 'rinderpest' which has made so much devastation among the cattle of Germany, and is I believe, now giving trouble to the farmers of Minnesota?"

Answer.—This is one of the most serious of all the contagious diseases of cattle and has caused immense losses to the farmers of European countries, but hitherto has never gained a footing in America, so that our correspondent must have been misinformed as to its existence in the neighboring state of Minnesota. Cattle plague is extremely infectious as well as contagious, and in this respect resembles smallpox in its virulence, while the death rate of those affected is from 90 to 95 per cent. Thus it will be easily realized

that the presence of cattle plague in a country is a disaster less serious only than war and causing losses to be estimated in the millions. The history of the disease extends back to the 4th century, when the human migrations of that period introduced the disease into Western Europe. The losses caused by cattle plague since then have been very serious, but until we come to more recent years it is impossible to form an idea of their magnitude. But a consideration of a few of the outbreaks of the present century will be sufficient to show the immense damage it has caused. "In Denmark alone there perished more than two millions from 1745 to 1752" "In 1841 oxen which came from Roumania and Austria introduced it into Egypt, where it killed 500,000 animals; from 1844 to 1845 Russia lost 1,000,000 cattle. Austria lost 500,000 from 1847 to 1864. In 1870 France lost 100,000. In 1865 the loss in England was nearly 100,000 head."

All civilized countries now have stringent quarantine regulations to prevent the importation of infected animals or hides from the countries where cattle plague is still supposed to exist, such as India and Russia. The most notable recent outbreak of the disease was last year in South Africa, where it caused immense losses, not only among cattle, but wild animals of the ruminant class.

It will be unnecessary here to describe the symptoms of the disease, suffice it to say that it is a fever of acute type and usually causes death in from 4 to 7 days.

Removal of Afterbirth.

R. T., Rapid City: "What is the best method for the removal of the after-birth of the cow? Are any operations which may be necessary difficult or dangerous?"

Answer.—Removal by hand is the safest and best method. The well-oiled hand, not a large one, is passed into the womb and the after-birth separated from the womb by gently detaching the cotyledons from it. The cotyledons are spongy looking growths which project from the surface of the womb and are attached to it by a somewhat narrow neck. There are some hundred of these cotyledons and the after-birth is attached to every one of them more or less closely. In removing it the cotyledon is grasped in the hand and the first finger and thumb are used to strip off the after-birth. The difficulty of this is only in cases where the attachment is very close and firm, and when the more remote cotyledons are beyond the reach of the hand. The danger lies in the chance of an inexperienced operator tearing the cotyledon from the womb, when internal bleeding will result, or in leaving part of the after-birth to putrify in the womb. If possible the operation should always be done by a veterinary surgeon, but in case of necessity the work can be attempted by an unskilled man.

Rheumatic Arthritis.

O. K., Wawanesa, Man.: "I have some pure bred pigs three months old, which show a swelling round the hocks, feels as if there was water in it; they and some other small pigs have a way of flinching down their backs, even when not touched. Their sty, otherwise good, has been rather draughty from underneath, as it is raised from the ground. Is this perhaps to blame for it?"

Answer.—Your pigs are affected with rheumatism, causing the puffy swellings of the joints. You should give them some salicylate of soda and keep them warm and dry.

At the close of the preliminary examination into the Sutor cattle case at Calgary the accused was sent up for trial, but admitted to heavy bail.

BARB-WIRE CUTS

Owing to the ragged nature of the wounds and the poison of the wire, are the most difficult of all flesh wounds to heal, and the only successful remedy is

**DR. WARNOCK'S
ULCERKURE**

It is the greatest healing medicine ever discovered. A positive guarantee is given that if Ulcerkure will not heal any and every kind of a wound, your money will be refunded. Send a 3c. stamp for sample bottle, and prove to yourself its wonderful healing properties, especially for Barb-wire Cut.

\$1 Bottle.

Sold by dealers, or sent on receipt of price by

WESTERN VETERINARY COMPANY, Box 478, WINNIPEG.

**Lump Jaw CAN BE . .
CURED**

The spread of Lump Jaw among the herds of the Territories has caused the introduction of numerous cures—most of them have proven failures. We have profited by the failures, because we experimented long and carefully before we decided to bring

**MITCHELL'S
Anti-Lump Jaw**

before the farmers and cattle breeders. We have proven it a cure and leaves no visible trace of the disease.

**We will absolutely guarantee
it to cure all cases.**

If it fails, we will return the money to the purchaser.

PRICE, \$2.00

Post-paid to any address. Send for descriptive booklet and treatise on Lump Jaw, FREE for the asking.

W. J. MITCHELL & CO.

CHEMISTS

PRINCE ALBERT, WINNIPEG,
N.W.T. MAN.

**BRANDON
MARBLE AND GRANITE
WORKS.**

SOMERVILLE & CO.,

Dealer in

**MARBLE AND MANITOBA
GRANITE MONUMENTS**

Headstones, Mantelpieces,
Cemetery Fencing, Tablets,
etc.

ROSSER AVE, BRANDON, MAN.

Represented by W. Somerville, W. C. Stewart,
Arthur W. Hocky, E. Patterson.

When writing, mention this paper.

Newly Furnished throughout.
All Modern Conveniences.
Most centrally located Hotel to the Business part of
the City.

DAVID W. BEAUBIER, PROPRIETOR.

The Palace Hotel

UNDER NEW MANAGEMENT.

Accommodating Porter meets all Trains.

Open Day and Night.

Good Stabling in connection.

Rates \$1.00 per day.

EIGHTH STREET, BRANDON, MAN.

NEAR ROSSER AVE.

When writing mention The Farmer.



Will Poultry Thrive on Grain Alone?

Poultry raisers have found that nothing equals a certain amount of animal matter as feed in the production of eggs. Many of them are now going a step further and using animal matter in the growing of young chickens rapidly for market. The idea is based on sound principle, because meat contains the elements necessary for making flesh in fowls as well as other animals. Experiment stations have now taken up the question and are trying to find out whether as rapid gains can be made with vegetable foods containing a large amount of protein, as these flesh-forming constituents are called, as can be obtained from meat, animal meal and cut green bones. The following account of work done along this line at the New York Experiment Station, Geneva, will be interesting reading:—

In feeding poultry, as in feeding other animals and all plants, the nitrogenous compounds are the most expensive. We can economize in fertilizer-buying by selecting the brand or chemical whose composition proves it best and cheapest; in cattle-feeding the shifting prices of the various by-products allow us to discriminate to our advantage in the purchase of protein; and a still wider difference separates the cost of nitrogenous materials in the many poultry foods. Fowls and ducks naturally eat considerable animal matter as well as vegetable food. Can we economize here? Is the cheap protein of peameal, oatmeal, wheat bran or linseed meal as efficient as that in the more expensive animal meal, dried blood or fresh bone; or must we include some form of animal nitrogen in our rations to replace the grasshoppers and earthworms of natural poultry life?

Animal Nitrogen Best.—Experiments made at the station with chicks, pullets, cockerels and ducklings seem to indicate conclusively that part of the protein must be drawn from animal sources if we are to get the best results; and, with ducklings in particular, some form of animal food in addition to skim-milk or curd, seems essential for the maintenance of health and vigor.

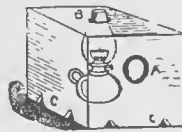
Tests with Chicks.—Two sets of trials were made with chicks. One lot in the first trial was carried from one-half week of age until twenty-five weeks old upon a grain mixture of corn meal (12), wheat flour (4), ground oats (2), wheat bran (1), wheat middlings (1), peameal (1) and old process linseed meal (1), with wheat, corn, animal meal and fresh bone. The corresponding lot upon vegetable food received a grain mixture of pea meal (6), old process linseed meal (4), wheat bran (2), ground oats (2), high grade gluten meal (2), wheat middlings (1), and cornmeal (1), with wheat, corn and skim-milk or curd. These two rations were practically equivalent, so far as amounts of protein are concerned, although the "animal meal" feed had a little wider nutritive ratio than the grain feed. The distinctive difference was that in the first ration about two-fifths of the protein came from animal sources, while in the other ration all came from grain except a little from skim-milk. In the second trial the chicks were started at six weeks and carried for fourteen weeks, the contrasted rations being as in the first trial.

Results with Chicks.—In each trial more food was eaten by the lot receiving animal protein, the gain in weight was more rapid and maturity was reached earlier, less food

was required for each pound of gain, and the cost of gain was less. During the first twelve weeks of the first trial the chicks on animal meal gained 56 per cent. more than those on the vegetable diet, although they ate only 36 per cent. more; they required half a pound less of dry matter to gain one pound, and each pound of gain cost only 4½ cents, as compared with 5 1-5 cents for the grain-fed birds. During the next eight weeks the cost of gain was 7½ cents and 11 1-5 cents, respectively. The animal-meal chicks reached two pounds in weight more than five weeks before the others; they reached three pounds in weight more than eight weeks sooner; and three pullets of the lot began laying four weeks earlier than any among the grain-fed birds. With the second lot of chicks, starting at six weeks of age, the differences were in the same direction, though not quite so striking; thus showing that the great advantage of the animal nitrogen is in promoting quick, healthy growth and early maturity, rather than increasing the tendency to fatten.

A Simple Egg Tester.

The accompanying illustration from a poultry journal shows how a cheap egg tester can be made. Take a box about one foot square and the same in height or high enough for the lamp chimney to come up through a hole in the top about an inch, as



shown at B. The hole at A is the size of an egg, and around it is fastened a thick layer of cloth or felt, so arranged as to fit closely against the egg. The openings at C C are to let in air to the lamp. If a suitable box is not at hand one can be made of almost any kind of lumber or even paste-board.

Keep a close watch on the turkey hens so that you will know where their nests are.

A hen will wrestle for a month trying to hatch a chick from a glass egg, but yet she is no worse than the woman who will pay two car fares to buy an article for 99 cents when it can be had next door for a dollar.

Young ducks are funny things, for while older ducks may thoroughly enjoy a shower of rain, the young duckling will stand with its mouth wide open looking upward until it drowns. "Good weather for ducks" is all right for old ones, but get the young ones under cover. Damp sleeping places will give young ducks rheumatism.

Do not be disappointed if you meet with a few failures in raising poultry. Experience does not cost much and is generally worth all it costs. There are many people making their living by raising poultry and they have gained their knowledge by experience. So we must not be discouraged if at first we don't succeed, but try, try again.

Many people think that it is difficult to breed any of the pure breeds of poultry and therefore are content with mongrels. It is no more difficult in any sense to breed good than that which is scrub stock. The eggs hatch just as well and the young chicks are just as hardy. Besides the pure breeds mature earlier than those of mongrel parentage. Try keeping a few pure bred fowl.

Louise Bridge Poultry Yards

UNCONQUERABLE.

My noted strain of Single and Rose Comb White Leghorns, White Wyandottes and Black Spanish have, again proved their superiority, winning at the **Brandon Poultry Show**, February, '99, 15 first prizes, 10 seconds, 4 thirds, 3 Silver Cups and Gold Medal; also \$5 sweepstake for 4 highest-scoring birds in the Show. I exhibited 39 birds, with an average score of 94¼ points per bird. A record like the above was never equalled in Manitoba. I have mated up the finest pens of the above varieties that can be found in America. Eggs from these grand pens \$3 per 13, \$5 per 26. B. P. Rock Eggs \$2 per 13. No more White Wyandotte Eggs for sale. Have all orders that I can possibly fill. Address—

GEORGE WOOD,
Louise Bridge P.O., Winnipeg, Man.

Oak Grove Poultry Yards,

LOUISE BRIDGE P.O., WINNIPEG, MAN.

A few pair of young Pekin Ducks from imported and prize-winning stock, at \$4.00 per pair.

My Turkeys are all sold, except those required for breeding stock. Am breeding from two of as fine yards as there are in Manitoba.

I am sole agent for Manitoba and N.W.T. for **GEO. ERTLE & CO.'S VICTOR INCUBATORS and BROODERS**. These machines have copper tanks, moisture pans, thermometers, egg testers, egg turners, regulators and lamps. Everything is complete, and every machine goes out with a guarantee that it will do as represented or money will be refunded. Send for 1899 Circular.

Address—**CHAS. MIDWINTER,**
Louise Bridge P.O., Winnipeg.

BUY

WINTER LAYERS.

LIGHT BRAHMAS.

Pen No. 1. Were purchased and selected by Judge L. G. Jarvis, of Guelph. Eggs \$2.50 for 13.

Pen No. 2. Eggs \$1.50 for 13.

I am importing ANCONAS, the greatest winter layers known. A limited number of sittings at \$5 per 13 after April 25th.

ANCONA POULTRY YARDS, Box 562, Winnipeg.

Buff Cochins.

Eggs at \$2 per 13 from my Prize-breeding Pen. These birds have never been beaten. Also a few choice Cockerels for sale cheap.

F. D. BLAKELY,
2304 285 Ellen St., Winnipeg

G. H. Grundy, Box 688, Virden, Man.,

Breeder of Exhibition **B.P. Rocks, S.L. Wyandottes and B.R. Game Bantams**. I have mated this season four pens of B.P. Rocks and two of Wyandottes. Pen A in B.P. Rocks mated for cockerels; pen headed by imported cock. Pen B mated for pullets, and headed by 1st prize cockerel at Man. Poultry Ass. Show at Brandon in Feb. Pen C mated for pullets, and headed by an imported cockerel from which I look for grand results. Pen D mated for cockerels, and headed by my ideal cockerel scoring 92½ by Judge Shellabarger at Brandon, the highest scoring B.P. Rock in the Show. Wyandottes mated for best results. Can furnish Eggs from the above pens at \$3 per 13, \$5 for 26. If you want the best at fair prices, here they are. Satisfaction guaranteed.

WHITE PLYMOUTH ROCKS.

Winning at last Exhibition of Manitoba Poultry Association four firsts and two second prizes. If you want good birds, write for prices.

S. B. BLACKHALL,
606 McMicken St., Winnipeg.

J. TODD & CO.

Breeders of pure Stock in the following lines of Poultry:—

Barred and Buff P. Rocks. Golden and Silver Spangled Hamburgs. Black Langshans. Eggs, \$2 for 13; \$3.50 for 26.

Stock for Sale. Will help customers to get any other Stock required.

J. TODD & CO., 457 Henry St., Wpg.

Preserving Eggs.

By Frank T. Shutt and A. G. Gilbert, of
the Central Experimental Farm,
Ottawa.

Having received numerous inquiries from farmers during the past two months respecting the merits of "water glass" as a medium in which to keep eggs, we are led to think that certain conclusions drawn from an experiment, lately brought to a close, with this and other preservatives will be of interest to your readers.

The investigation was commenced last September, perfectly fresh eggs from the farm poultry house being used for the test, which consisted in immersing the eggs for varying lengths of time, from a few hours to six months, in (a) lime water, and (b) 10 per cent. solution of "water glass." Those eggs which were treated for a few hours, days or weeks, as the case might be, were subsequently placed together with the untreated eggs to be used as a check, in a rack within a drawer in the laboratory till the close of the experiment, March 30th, 1899. All the eggs were at a temperature from 65 deg. to 72 deg. F. throughout the trial.

The testing consisted in breaking the eggs into a glass and noting the appearance of the "white" and yolk, whether the yolk was stuck to the shell, size of air-space, odor, etc. The eggs were then poached and again the odor, appearance, etc., noted. Without giving in detail the results of the various trials, it may suffice for present purposes to summarize the conclusions reached, as follows:—

CONCLUSIONS.

1. In no instance, either of treated or untreated eggs, were any "bad" eggs found.

2. In all cases where the eggs were not kept covered throughout the period of the test with the preservative solution, shrinkage of the contents had taken place, as shown by the larger air-space, the less globular form of the yolk, and in many instances by the adherence of the yolk to the shell. The eggs treated for seven days and less with lime-water showed somewhat less shrinkage than those treated a similar length of time with silicate of soda.

3. It would appear that lime-water and "water-glass" used continuously are equally efficacious in preventing shrinkage. They may also be said to give practically the same results as regards both external and internal appearances, flavor, etc., of the eggs preserved. Since "water-glass" (silicate of soda) is more costly and more disagreeable to use than lime-water, we could not from the present results recommend the former as the better preservative.

4. The albumen or "white" in all the preserved eggs was very faintly yellow (though not to the same degree in all the eggs), the tint becoming deeper on boiling.

5. No offensive odor was to be perceived from any of the eggs when broken, but in all instances a faint but peculiar musty or stale odor and flavor developed on poaching.

6. It is probable that no preservative will prevent the loss of flavor possessed by the fresh egg, but those which wholly exclude the air (and thus at the same time prevent shrinkage from evaporation) will be the most successful. Continuous submergence is evidently better than treatment for a few days.

"Water-glass," known chemically as silicate of soda is a fluid quoted at 60c. per gal. It is highly caustic, due to excess of soda, and consequently is more disagreeable to use than lime-water.

The lime-water may be made by putting 2 or 3 pounds of good fresh lime in 5 gallons of water, stirring well, at intervals, for a few hours and then allowed to settle. The clear supernatant fluid can then be poured

over the eggs, which have been previously placed in a crock or water-tight barrel. Some authorities recommend the addition of a pound or so of salt to the lime-water, but the writers are of the opinion that this is unnecessary, and probably leads to the imparting of a limey flavor to the eggs by inducing an interchange of the fluids within and without the egg.

The all-essential points to be remembered are: (1.) That the eggs to be preserved shall be perfectly fresh, and (2) that they shall be covered with the preservative fluid.

Whitewash.

This is the time of the year when the whitewash brush can be used to good advantage. The poultry house is one of the first places that should get a good application of whitewash. If the building is a hot one, it will be cooler if whitewashed outside, including the roof, as well as inside. Give all coops a coating, too. While you are at it give the fences a coating of it, colored to suit. Try it on all the out-buildings. It will relieve the eye wonderfully and destroy much vermin. The following recipes are recommended as being good ones for making a wash that will not rub off on the clothes as the common lime-wash always does:—

Slake, in boiling water, one-half bushel of lime, keeping it just fairly covered with water during the process. Strain it to remove the sediment that will fall to the bottom, and add to it a peck of salt dissolved in warm water; three pounds of ground rice boiled in water to a thin paste; one-half pound powdered Spanish whiting, and a pound of clear glue dissolved in warm water. Mix the different ingredients thoroughly, and let the mixture stand for several days. When ready to use, apply it hot. If a less quantity is desired, use the same proportions.

A good whitewash for use upon outside work may be prepared as follows: Slake in boiling water one-half bushel of lime, and strain as before. Add to this two pounds of sulphate of zinc and one pound of salt dissolved in water. If any color but white is desired, add about three pounds of the desired coloring matter, such as painters use in preparing their paints. Yellow ochre will make a beautiful cream color, and browns, reds, and various shades of green are equally easily obtained.

Another excellent wash, lasting almost as well as ordinary paint, may be prepared for outside work as follows: Slake in boiling water one-half bushel of lime. Strain so as to remove all sediment. Add two pounds of sulphate of zinc, one pound common salt, and one-half pound whiting, thoroughly dissolved. Mix to proper consistency with skimmed milk and apply hot. If white is not desired, add enough coloring matter to produce the desired shade. Those who have tried this recipe consider it much superior, both in appearance and durability, to ordinary washes; and some have not hesitated to declare that it compares very favorably with good lead paints. It is much cheaper than paint, and gives the houses and yards to which it is applied a very attractive appearance.

What is the difference between a hen and the average partizan newspaper? The hen lays while the paper lies.

A poultryman of ripe experience says: "If I were to start again, I think I would go and work for some one who has succeeded, and so learn the business, the same as a boy learns the mercantile business or a trade, for it is certain that an amateur cannot begin with a large lot of fowls and succeed. It can only be by beginning with a few and learning slowly by experience."

A representative of The Farmer called at the Winnipeg Poultry Yards recently and found them in fine condition. Mr. Wise had about 40 young chicks. His Houdans are in fine shape and when it is remembered that his birds won numerous first prizes at Brandon in February we confidently look for good results. His Golden Laced Wyandottes are doing well. He obtained a sitting from C. Kella, Ohio, a noted prize winner, and from these he has one half dozen fine healthy chicks that will furnish new blood, which will mate well with his present stock. From a sitting of 14 Houdan eggs obtained from D. C. Trew, Lindsay, Ont., he had 11 fine chicks, which will give him new blood in this line.

Light Brahmas, Buff Cochins, B.P. Rocks, W. Wyandottes, Houdans and Pekin Ducks.

Stock for sale. Eggs \$2 per 13; special price for larger quantities. No pains or expense has been spared in getting together the best stock obtainable. Our pens are headed by first prize birds at Winnipeg Poultry Show and Exhibition. For best results address—

VIRDEN POULTRY CO., Box 355, Virden, Man.

EGGS FOR HATCHING.

From the following varieties of Standard-bred poultry—B. P. Rocks, White & Brown Single Comb Leghorns, \$1 per sitting. White-face Black Spanish, Black Langshans, Buff Cochins, Light Brahmas, S. L. Wyandottes, \$2 per sitting per 13 Eggs. Toulouse Goose Eggs, 40c. each. Imperial Pekin Duck Eggs, \$1 per 11. All Eggs except B.P. Rocks, W. & B. S. C. Leghorns, and Pekin Ducks, half price after June 1. Fertility guaranteed.

RELIABLE POULTRY YARDS, HOLLAND, MAN.

John Longmore, Prop. Correspondence solicited.

LIGHT AND DARK BRAHMAS, SILVER GREY DORKINGS, WHITE PLYMOUTH ROCKS.

EGGS \$2 per 13. The above birds are all of the very best stock, winning 10 prizes at Manitoba Poultry Show, 1899. The Dorkings have never been beaten.

A. MUTTER, Brandon, Man.

Light Brahmas, Barred P. Rocks, Indian Games, Black Minorcas, Pekin Ducks.

My birds are all from high-class imported stock. Satisfaction guaranteed. EGGS \$1.50 per 13.

REUBEN CLIFFORD, Elkhorn, Man.

B. P. ROCKS.

Eggs for Hatching.

I can supply Eggs from FIRST CLASS STOCK at \$2 per setting. I have some of the best birds in Manitoba, and can guarantee a large percentage of fertile Eggs. E. B. LEMON, care of Osler, Hammond & Nanton, Winnipeg.

WINNIPEG POULTRY YARDS.

HOUDANS AND GOLDEN WYANDOTTES.

At Poultry Show, Brandon, February, 1899, won on Houdans 1st Cock, 1st Cockerel, 1st Pullet, 1st Pen. Special for best display. Numerous prizes won last five years. Have also grand pen Golden Wyandottes. Eggs from either breed \$2 per 13. Choice stock for sale. Address—S. Wise, 633 Ross ave., Winnipeg, Man.

B.P. ROCKS EXCLUSIVELY

Hawkins' strain. Have two choice breeding pens Eggs at \$2 per 13.

Carberry Poultry Yards. Wm. Atkin, Box 27.

Single - comb White Leghorns.

SPECIAL OFFER.

After June 1st will supply Eggs for Hatching from my high-class White Leghorns at \$1 per setting of 13. Barred Plymouth Rocks, 75c. per setting of 13.

W. A. PETTIT,

Acme Poultry Yards, Boyd Ave., Winnipeg.

BRONZE TURKEY EGGS

Chas. Midwinter's stock. Eggs \$1.50 per 9.

OLIVIA ROUTLEDGE, Miami, Man.

Scratchings.

Too much meat will make the bowels too loose.

The poultry business is no "cinch" for a lazy man.

Scald out the drinking vessels regularly at least once a week.

Do not have the meal too sloppy, but moist enough to make it crumbly.

If the hens get too fat, feeding with oats for a few days will soon reduce them.

Chicks should be fed at regular intervals, but food should not be left before them all the time.

See that you have a good drinking fountain filled with fresh water for the fowl to drink. It will pay well.

Rolled oats or pinhead oatmeal is an excellent food to start chicks on. After the first week change gradually to cracked wheat.

Young chicks should have free access to grit after the first day. It is even a good plan to mix a small amount of grit in their food.

Scatter the grain well when feeding it to hens and chickens. It will make them hunt for it and give all a fair chance to get their share.

The Brandon Sun says that Mr. Currie, a local dealer, is sending out circulars asking for 60,000 fresh eggs, which he will pickle by a process of his own and store up for winter prices.

Poultry like shade and will spend considerable time under trees during the hottest part of the day. Therefore if your poultry runs haven't got trees or bushes in them, plant sunflowers for shade.

It is false economy to try to keep thirty hens in a house that has room for only twenty. The thirty hens will lay fewer eggs than if the smaller number only were kept. Remember this when building a poultry house and build large enough.

While eggs are cheap and fresh is the time to put them by for winter use. Hence the spring or early summer is the time usually chosen for putting them down, because there is less danger then of partially developed chickens finding their way into the preserving crock.

As an investment the hen ranks with the best, and the fact that the stock is always in demand, the shares are accessible to those whose means are limited and the dividends are declared with regularity, make her a leading and favorite stock in the markets of the world, for the poor man as well as the rich.

As hens spend nearly half their time on the perches, see that they are comfortable and free of vermin. Don't have them too high. Don't have the poles smaller than two inches in diameter or width. Three inches makes a good width for a perch. Have them firm, but not nailed in place; they can then be taken out and cleaned. Don't forget to give them a good coating of whitewash.

There is one special danger to which chicks hatched in incubators have been found liable, to which those hatched under hens are strangers. It has been found that such chicks are deformed without any apparent reason. This it is now believed is caused by hasty movement of the drawer in which the eggs are hatched. The eggs need to be turned twice a day and if these drawers are pushed back hastily the eggs are shaken so that the members of the embryo chick are liable to get jolted out of place. Gentle handling will prove a sufficient safeguard against any such risk.

WATSON'S
CHAMPION

FIELD CULTIVATOR

Can't be beaten on Summer Fallow.

Hilborn's Combination Stubble and Breaking Plow.

The only perfect Combination Plow made. Full 14 in. wide.

FULL LINE OF CULTIVATING MACHINERY.

If your dealer don't handle our Goods, write us direct.

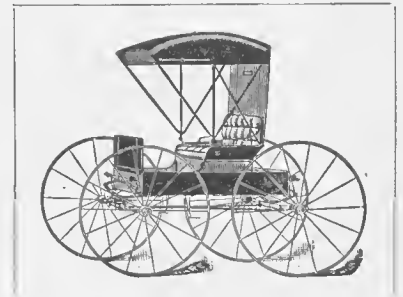
JOHN WATSON MANUFG. CO., Ltd.,

134 Princess Street, WINNIPEG.

FOR THE BEST VALUE IN

BUGGIES, WAGONS, GANG PLOWS AND BICYCLES.

XX Rays Gang Plows,
Rushford Wagons,
McLaughlin Bugies and
Gananoque Buggies.



Everything at Rock-Bottom Prices, consistent with first-class goods.

A. C. McRAE,

Cor. KING and JAMES STS.,
WINNIPEG, MAN.

Mention this Paper.

The Manitoba Anchor Wire Fence Co., Ltd.

120 KING STREET, WINNIPEG, MAN.

Manufacturers of

FARM & ORNAMENTAL FENCING.



No Barbs.

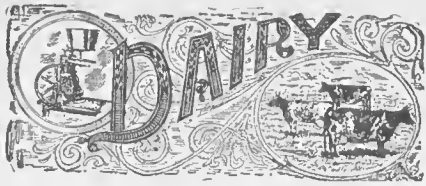
No Sagging.

THE STRONGEST AND CHEAPEST FENCE IN THE MARKET.

ESTIMATES FURNISHED ON APPLICATION.

Correspondence Solicited.

Address The Company, - - - Box 848, Winnipeg.



Effect of Fat on the Yield of Cheese.

The Dairy Superintendent informs The Farmer that at some of the cheese factories in the province it is taking an unusually large amount of milk to make a pound of cheese. In some cases it has taken nearly 12 pounds of milk to make a pound of cheese, when a little over 10 lbs. is the average quantity required. The reason given for requiring the increased amount of milk is that the cows are so low in flesh that they are putting a very low per cent. of butter fat in their milk. This condition of affairs will improve as the cows gain in flesh; but it shows clearly how necessary it is whether for cheese or butter making, that cows should be well wintered and begin their spring work in good heart.

No farmer would let his horses run around the straw stack all winter and then turn them into spring work without preparing them for it. He would not expect any work at all from them. Neither should he expect returns from cows wintered in the same way. Careless wintering knocks off nearly all of the summer's profits. Prepare the cows for their summer's work as you prepare the horses for their's and dairying will wear another face.

The poor condition of the milk also calls to mind the controversy about the value of butter fat in cheese-making. It is plain that 100 lbs. of the milk referred to is making fewer pounds of cheese than normal milk should make, because of the lack of butter fat. In this connection an experiment conducted by Professor J. W. Decker, instructor in cheese making at the Wisconsin Dairy School, will be of great interest. His results were certainly a surprise to many Wisconsin dairymen. Cheese was made from six samples of milk, each weighing 200 lbs., ranging in butter fat from nothing to 5 per cent., with the result that the cheese made from 1 per cent. of butter fat was one-third larger than the one made from the milk with no butter fat. That made from 2 per cent. milk was still larger and so on to the 4 per cent., which cheese was fully twice as large as that having no butter fat. The cheese from 5 per cent. milk was a little larger than the 4 per cent. and the quality of the cheese improved with the additional fat in proportion to the increase in size.

Sometimes people talk about a cheese cow and a butter cow, meaning that the milk is better adapted to either cheese or butter making according to its richness in butter fat, but there is a good deal of nonsense about it. For the number of pounds of cheese any milk will make depends very largely on the amount of butter fat there is in it rather than on the total amount of milk.

The ideal dairy cow, as illustrated on the prize list of the Western Agricultural and Arts Association, at p. 111, is a model of symmetry. Farmers looking for a dairy Shorthorn should make a study of her milk vessel. That she could be readily turned into beef when no longer wanted for the milk pail, every reader will readily acknowledge.

Why not carry out the idea of a little education in this, and have instead of a beef cow a typical dairy one?

Dairying in Assiniboia.

J. W. Mitchell, the new superintendent or dairying for the Dominion Government in Assiniboia and Saskatchewan, reports that owing to the unusually backward season the creameries were somewhat later in starting than was expected at one time. Moose Jaw opened on April 28th, Whitewood, May 11th, quite a number on May 15th, and most of the balance on May 22nd. As far as can be judged at the present time the outlook for the season in almost all the creameries is quite bright—more so than it was at the beginning of last season. The much higher average price realized in 1898 than in 1897 accounts for the more hopeful spirit existing among our creamery patrons. In some creameries where the patrons delivered their own cream, the butter netted for the season, '16 cents per pound, after deducting the cost of making.

Dairy Meeting at Steinbach.

The local dairy convention held at Steinbach was a successful one, if judged by the number in attendance and the interest taken in the addresses. Miss E. Cora Hind, secretary of the Manitoba Dairy Association, explained the object of the meeting, gave a brief resume of the work done by the association and urged her hearers to become members, and thus help along the good work. Her address was interpreted by Hugo Carstens, of the Northwestern, who kindly attended to interpret all the addresses.

C. C. Macdonald, Provincial Dairy Commissioner, spoke on the care of milk, explaining how bad odors got into milk and how some of the taints from filth caused trouble in making cheese. He called attention to the yellow scum that forms in the seams of tinware and how careful all should be in keeping every vessel used in handling milk absolutely clean. An aerator was brought in, set on a milk can and a pail of water run over it to show how it worked. While this was being done the principle of aerating milk and its value in cheese making was ex-

plained. A lesson was thus given to the eye as well as the ear and an impression made, that will bear fruit. A Babcock Tester was brought in from the cheese factory and a sample of skim milk and new milk tested.

Another practical lesson was obtained from the butter room of one of the storekeepers. Some half-dozen samples of butter, all of different shades of color and quality, were ranged side by side, and the question asked how a storekeeper was going to make anything out of it. It was also pointed out that much of the milk would not make much more than three pounds of butter per 100 lbs, which at 8c a pound (which was all that the local stores were paying) would amount to only 24c. While the same milk made into cheese was worth over 60c. Mr. Macdonald urged his hearers to stop making butter and send the milk to the local cheese factory.

The next speaker was G. Harcourt, editor of The Nor'-West Farmer, whose address was given in a recent issue of The Farmer. He dwelt particularly on the necessity of preparing cows for the summer's work, likening it to the fitting of horses for the spring work.

The Mennonites expressed themselves being well pleased that the dairy association had given them a meeting.

A couple of cows at Manitou made too free with a lot of bluestoned wheat lately and had a hard struggle to get over the dose.

New York dealers finds that since the enforcement of the law which requires process butter to be marked "renovated" they cannot handle it at all. People do not want to eat butter that they know has been made out of what would otherwise be unsaleable, no matter how clean it may appear after it has passed through the renovating process. What they want is good butter and all imitations to be successful must sell as good butter. The Farmer wonders what is going to be done with all the great variety of dairy butter that is finding its way to country stores week by week at the present time.

"ALEXANDRA" and "MELOTTE" CREAM SEPARATORS.

The Challenge Accepted.

The agents of "The Alpha Laval" are boasting that a challenge was issued which we dare not accept. No challenge has reached us beyond certain vaporings in the press and of sub-agents. Nevertheless, we shall, for the third time, submit our "Alexandra" and "Melotte" Machines to a public test against all comers at the Industrial Fair at Winnipeg next month. We do not require a "farm" to test our machines, as two square yards is ample space. As to the date of the test, we think the 15th July will suit the public as well as the date fixed by the Laval people, viz.: 15th June.

Now as to the occasion of this "storm in a teapot":—We read in the dairy journals an account of a frightful accident that happened in April last down in Illinois. We did not cause the accident; we were sorry to hear of it; but coming from a man who occupies in his State a position corresponding to that of the Dairy Commissioner in Manitoba, we could not question its veracity. It occurred to us that he might, however, have been misinformed, and communicated with him as follows:—"Is report of a frightful accident with an Alpha Separator thoroughly substantiated?" receiving this reply: "We have received a letter from Mr. J. W. Segar, manager of the Creamery, in which he lays the blame on the engine running away; but in discussing the matter with expert Separator men, they claim no other machine but the top heavy Alpha would have made an accident in that connection." As already said, we were sorry to hear of the occurrence, considering it damaging to Cream Separators of every kind; and we deemed it our duty to point out in our advertisements that the great lateral strain in rigid spindle Separators, which, if it does not actually cause a destructive accident, materially increases the wear and tear, and shortens the life of a machine, was eliminated in our machines by the mode of attaching the bowl to the spindle. Both in the "Alexandra" and "Melotte," the bowl is free to move in all directions and the mode of attaching the bowl to the spindle forms a universal joint, reducing friction and strain in a way not found in any other machine.

As to the cost of the Turbine machine in the Dairy School, we do not know what it cost the Department, but were informed the purchase price was \$500. If it is now sold for \$375, we can only say we will at any time supply a machine of more than double the capacity for that money.

We regret our esteemed competitors should have introduced American methods of advertising, which consists too much of accusing their opponents of lying, and we have found it necessary to vindicate ourselves from that charge on this occasion, hoping we shall not be called upon to do so again.

R. A. LISTER & CO., Ltd.

232 King Street, WINNIPEG.

To Butter Makers of Manitoba.

By C. C. Macdonald.

1st. Don't fail to see that your store rooms are properly disinfected for mould. Use plenty of hot lime whitewash.

2nd. If you have ice drums for cooling your store rooms see that they are kept full of ice. Fill them every day and as often in the day as necessary. Use plenty of salt in the drums. Coarse salt will do.

3rd. Salting Butter.—Use a full ounce of salt to the pound of butter. The British Columbia trade requires that amount of salt. If your butter contains too much moisture, slightly increase the amount of salt, as a good portion will wash out in the water as it is worked out of the butter. The main object is to get the effect of a full ounce per pound of butter. Don't use poor, cheap salt.

4th. Don't fail to get a good quality of parchment paper, 50 pounds weight to the ream, if possible.

5th. Soak the parchment paper in strong salt and water for twelve to fifteen hours before using.

6th. Use a double lining of parchment paper to every box; this will afford better protection to the butter in transit and storage.

7th. If your large boxes hold more than 57 lbs. net, it is better to shave them down so that they will just hold the above amount when full. The extra pound is for shrinkage. Allow 57 lbs. in 56 pound box, 28½ lbs. in 28 lb. box, and 14½ lbs. in 14 lb. box. Tubs should be filled in like proportions.

8th. Don't forget that neatness and uniformity in packing butter is necessary, and will enhance the value of the product.

9th. Don't fail to put burlaps or sacks on every box or tub of butter before shipping. These coverings cost only about 1-9 of a cent per lb. of butter in the package, and they will keep the boxes clean, so that the better appearance of the packages will be worth many times over the cost of using them. This is very important.

10th. Be sure that you have accurate thermometers. The Dairy Superintendent has accurate thermometers, and will test your's with pleasure. Send them in to the Department of Agriculture (Dairy Branch), or present them when the Superintendent visits your factory.

A Baby Cyclone.

David Jackson, the well-known dairyman at Ravensglan, south of Newdale station, had a little sensation the other day that he will not soon forget. He was in the milk room, along with a Galician girl, separating milk, when the building was suddenly lifted and tossed over twenty yards away. The connecting pipe between the engine and separator was broken. The girl was badly scalded by the steam from the broken pipe and Mr. Jackson severely bruised on his head and shoulder, the separator also being damaged. A recently erected windmill on the top of his big barn was also badly demoralized. It is rare to find a cyclone straying so far north, and the seldomer the better.

At the Belfast (Ireland) show, Mr. Drummond, the Scotch Canadian dairy expert, ticketed every one of the prize exhibits with the number of points under each head of the scale by which the awards were made, thus giving every observer an object lesson on the qualities which in his estimation go to make good butter.

Refrigerator Car Service.

The Freight Department of the C.P.R. have issued their annual circular to the trade, giving the dates and points at which refrigerator cars will be attached to their trains. They are as follows:—

From Winnipeg and intermediate stations east of Brandon for main and branch line stations west of Dunmore, West Kootenay and the Pacific coast the car will run every Thursday.

From Brandon and intermediate stations to and including Moose Jaw for main and branch line stations west of Dunmore, West Kootenay and Pacific coast, the car will be run on Thursday.

From Edmonton stations to and including Calgary, for main line points west to the Pacific coast, Macleod and Crow's Nest branch stations west thereof and West Kootenay the first car will leave Edmonton June 1st and every Thursday during the season.

From Deloraine and intermediate Pembina branch stations to Winnipeg the first car will leave Deloraine Wednesday, May 31st, and thereafter under the following schedule:—Wednesday, June 14th; Wednesday, June 28th; July 12th; July 26th; Aug. 9th; Aug. 23rd; Sept. 6th; Sept. 20th; Oct. 4th.

From Broadview and intermediate stations to Winnipeg and all points east thereof to and including Port Arthur the first car will leave Broadview Wednesday, May 31st, and thereafter under the following schedule:—Wednesday, June 14th; June 28th; July 12th; July 20th, Aug. 9th; Aug. 23rd; Sept. 6th; Sept. 20th; Oct. 4th.

From Alameda and intermediate Souris and South Western branch stations to Winnipeg and all points to the Pacific coast, the first car will leave Alameda, Tuesday, May 23rd, and thereafter under the following schedule:—Tuesday, June 6th; June 20th; July 4th; July 18th; Aug. 1st; Aug. 15th; Aug. 29th; Sept. 12th; Sept. 26th.

A Minnesota Dairy Law.

Minnesota has a dairy law that makes it a misdemeanor for patrons of a creamery or cheese factory to furnish milk under the following conditions:—

Milk in dirty cans or vessels.

Sour milk.

Unwholesome or tainted milk.

Watered or skim milk.

Milk from a sick cow.

Milk from a cow fed decayed or unwholesome food.

Milk drawn from a cow five days before or fifteen days after calving.

Persons who violate this law are fined from ten to one hundred dollars and it is the duty of the butter and cheese makers receiving such milk to reject it, and to report it to the proper officials. It is just such work as this which has placed the product of that state so high, and this legislation came only as the outcome of the work of the Dairy Association.

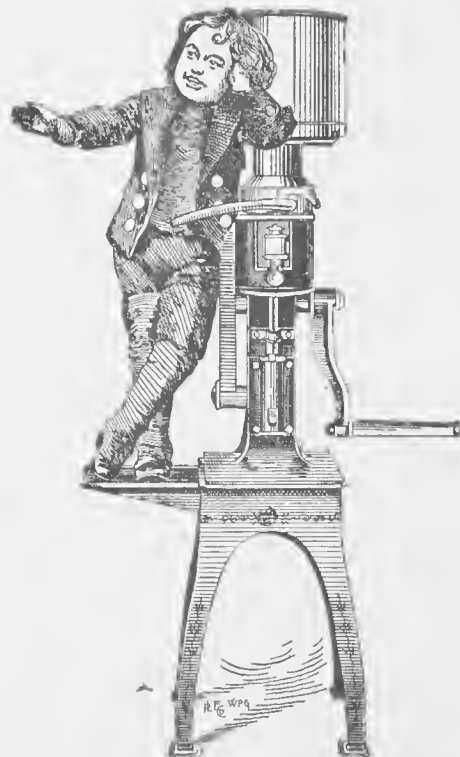
Minneapolis creamery expects to have a good season in this its third year. In 1897 its output was 21,000 lbs. Last year it was 35,000 lbs., and returns to the patrons 13½c. This year the patrons are still more numerous and prospects are very satisfactory.

J. A. Ruddick, Dairy Commissioner for New Zealand, writes that in his opinion the export of cheese to Britain from that colony will not be much increased. There will be a demand in the southern hemisphere for all the mild cured cheese New Zealand can make, and in that no other colony can compete with her. In butter he expects they will give Canada sharp competition. No money is spared in the equipment of first-rate factories and equipment, good salaries are paid to makers and the best factories are fitted with mechanical refrigeration. Government provides cold storage and grades the butter which is shipped to London by regular steamers.

BUY THE "ALPHA."

Dairymen of Manitoba and the Territories, give us your attention, and we will do you good. If you want a Separator that stands in the front rank, and on the right of the company, buy the "ALPHA"—the only Separator on the market with the "Disc" construction—dividing the milk into thin layers, producing separation with greatly reduced speed (and consequently less muscle to operate), and produce the most satisfactory results.

"The just as good" class run at much higher speed, requiring much more force to run them. Why trifle away more time experimenting with inferior makes. It is your duty to protect your boys' and girls' health. They will find operating the "Alpha Baby" a source of amusement. They have a right to some consideration, as they are the backbone of our fair Dominion.



THE CANADIAN DAIRY SUPPLY CO.

Remember the number: 236 King Street, WINNIPEG.

Communication.

Dursley, Eng., May 26th, 1899.

To the Editor Nor-West Farmer, Winnipeg, Man., Canada.

Dear Sir,—Although we are thousands of miles apart, your paper reaches us regularly, and the news contained therein is read with interest.

The evident sense of fairness and broad-minded policy which seems to pervade your leading articles tempt us to write you upon a matter in which we are deeply interested, and which also seriously concerns the interests of the farmers of Manitoba and N.W.T., and it is this:—An advertisement trying to defame the well-established reputation of the "Alexandra" Cream Separator, sold by the firm of Messrs. R. A. Lister & Co., Ltd., 232 King St., Winnipeg, has been made by an American house in the interests of a machine called the "Baby Alpha."

The advertisement savors of what is known in England as the confidence trick, as it speaks of the hard-headed farmers of Manitoba as the innocent and unsuspecting, which we consider an insult to the pioneer farmers of your great country.

The chief point we enlist your co-operation to refute is the statement made by this firm that the "Alexandra" is sold nowhere else but in Manitoba. Now, we are a firm of good standing, with means to back up what we say. If you doubt this, you can refer to the Bank of Ottawa, in your city.

In order to prove the barefaced untruthfulness of the statement made, we are prepared to give \$500 to the Winnipeg Hospital, and \$250 towards the expenses of any gentleman that you like to send over here to examine our books, if we do not show you that we have sold, during the past twelve months, over one thousand "Alexandra" Separators in France, over one thousand in Great Britain, and at least 250 in South Africa. As a matter of fact, we have sold double this quantity, but we want to be well within the mark. Provided, that this American Co. will do likewise if we do show you this.

Then again, if this machine, is so obsolete, how is it that no less than three Canadian firms are at the present time making exact copies of it?

We are not afraid of honest, truthful and upright competition, but taking, as we do, a great interest in the progress and development of the great Northwest, we have taken, in this case, the unusual course of addressing you, Sir, although a complete stranger, to assist us to some extent, in counteracting the injurious effects of the advertisement above referred to.

We are, yours faithfully,

R. A. LISTER & CO., LTD.
R. A. LISTER.**The Radiator Butter Maker.**

The successful introduction of the farm cream separator has led inventors to try and make a machine that will churn the cream immediately after separating. Two machines of this kind were placed on the market some ten or twelve years ago. The Accumulator churned the cream, but spoiled the grain, and the Extractor sought to make butter directly from the whole milk. Neither were a success. Still this has not deterred others trying and Count T. Nordenfelt, of Sweden, famous for the quick-firing gun which bears his name, has brought to New York a new machine which both separates and churns the cream. It is called the Radiator. The cream is separated by an ordinary separator bowl, then passed into a peculiar steel drum, revolving rapidly. Here it is subjected to great pressure and forced through small holes against a disk

of cream. In this way the grain of the butter is preserved.

The great objection that has been made to this kind of butter is that it is sweet cream butter and it will be necessary to educate a taste for it. Mr. Nordenfelt does away with this because by immersing the granular butter in soured milk for a little time the desired flavor of "ripened" butter is imparted. There can be no doubt about the rapidity with which the milk can be made into butter. At a dairy show in London, England, a cow was milked with a Thistle milking machine. The pipe of the Radiator was connected with the milking machine and butter churned before the cow was milked clean. Butter can be churned in 1½ minutes from the time milk is put in the machine, but only time will tell whether the machine will prove a commercial success.

Branding Cheese.

The following circular letter has been sent to the cheesemakers of Manitoba by the Provincial Dairy Commissioner:—

It has been stated that last year Manitoba cheese met with poor favor in the markets of British Columbia on account of the poor quality of the product. In order to protect our reputation as cheese makers, I would strongly advise branding all cheese, large or small, with the word "Manitoba," and then as cheese makers let us stand or fall by that word. If care is exercised in curing our cheese properly, as per instructions that have been sent out heretofore, we will not fall very far short. The letters for the brand should

be at least one-half inch long. If you have not got this brand in your factory, the Dairy Superintendent will be pleased to order one for you and have it sent to your address.

Should there be an occasional day's make of cheese that is not first-class, do not ship such cheese, but hold it in the factory and try to dispose of it at home. Usually this cheese is eatable and very often the patrons use it. But do not attempt to ship it away from home as it will injure the reputation of the whole make.

Again, as to curing cheese. With one or two exceptions our Manitoba cheese were as well made as any cheese in Canada last year, but in many cases the curing was not done so well. This part of the process of cheese making must not be neglected. Remember a cheese is only half made when it is first put into the curing room. Keep the curing room temperature up to 65 to 70 deg., turn cheese every day and hold for not less than 20 days—thirty is better—before shipping.

A milking competition open to single men only is to be one of the attractions at a forthcoming rural picnic.

The Canadian Holstein-Friesian Association are offering \$25 as a special prize, for a milk test at the Brandon Exhibition. It will be supplemented by \$25 from the Fair Board. The scale of points to be used in judging are: 10 points for constitution and conformation; 20 points for each pound of butter fat; 4 points for each pound of solids; 1 point for each 10 days in milk after the first 30 days (limit 30 points).

DURABLE—EFFECTIVE—ECONOMICAL.

OSWEGA FALLS, N. Y., April 25, 1899.

P. M. SHARPLES, West Chester, Pa.

Dear Sir,—It is now one year since we put in the No. 25 Tubular Separator. It has not cost one cent for repairs, and runs just the same as when first put in. It does fine work, and gives the best of satisfaction.

The ease with which we can change from light to heavy cream makes it of especial value to us, for we ship three grades of cream, and must therefore make both light and heavy cream most every day. When we need more Separators we will buy only Tubulars.

Thanking you for your courtesy in the past,

Respectfully,

E. M. RICHMOND,

Manager Fulton Dairy Co.

JOHN HART, Proprietor.

JOHN HART is one of the Greater New York's best known milk handlers. He handles large quantities of commercial cream, which must be smooth and uniform to suit his trade.

**THE SHARPLES
TUBULAR SEPARATOR**

fully answers this requirement,
and it will yours.

THE CLEANEST OF RAPID SKIMMERS.
THE SIMPLEST IN CONSTRUCTION.

THE MOST DURABLE AND ECONOMICAL.
A PRODUCT UNEXCELLED.

Sold on their Merits.

Send for Catalogue No. 73.



BRANCHES—

Toledo, O. St. Paul, Minn.
Omaha, Neb. Dubuque, Ia.
San Francisco, Cal.

P. M. SHARPLES,

West Chester, Pa.

Process Butter.

Stale butter, as every one knows, is both disgusting and extremely unpalatable. But American ingenuity is able out of such stuff, mixed pretty frequently with margarine, to work up an article that is not altogether unpleasant in flavor and appearance, and which can always be sold to the ignorant poor at prices that give more profit to the dishonest dealer than the genuine article. The operators are not very willing to let the public into their trade secrets and are badly hampered in their operations by the officers of the law. Holland is one of the countries in which the makers of margarine pursue their calling and it is surprising how like genuine butter the spurious article can be made and how much of the bad flavor can be taken out of genuine butter that has become rancid.

In Ireland a company has been formed and works put up near Dublin at which inferior Irish butter is very successfully renovated. The impure butter is first melted in a huge waterjacket lined tank, and from a spray above, water of 120 deg. temperature is turned upon the butter oil. The effect of this is to remove all the impurities. Then the melted butter is drawn off, placed in circular tanks, and by a process of violent agitation mixed with buttermilk. It passes through other circular reservoirs until finally the interesting process of aeration takes place. By means of a powerful exhaust system, cold and hot air are drawn upward through the liquid butter with such tremendous force that the stuff bubbles and boils as if over a fierce fire. When the operation is complete there is rejuvenated butter with the correct granular texture restored. It is purged of every impurity, dangerous germs are destroyed, all unpleasant tastes and odors are removed, and the butter is said to be worth something like twice the money in its reformed state.

The whole process was recently shown at work before a party of scientific men who gave it warm commendation.

With the low price at country points in Manitoba for butter, and the little demand for it even at these figures, the prospects are good for a lot of spoiled butter that will need to be rejuvenated or sold for soap grease. If it is "made over new" it will come into competition with good creamery butter. Why not send the cream to a creamery in the first place and have the butter made up right?

Foxwarren creamery, which opened early in May, is this year in charge of Mr. Piggott, who was an instructor in the Dairy School.

Professor S. M. Babcock, who worked out the rapid milk test that bears his name, deserves the thanks of every dairyman in that he did not patent his process. Had he done so he would have been a wealthy man now. The Farmer is pleased to learn that he is to be honored by the people of Wisconsin through their legislature appropriating \$300 to prepare a gold medal suitably inscribed, in recognition of the distinguished service he has rendered the dairy industry by the invention of the Babcock test, and by his faithful and intelligent work.

In some places the farmers say "grass is king," or in other words, that means that what grows on the grass is apt to turn more profit than that which grows on the plowed ground, where expensive machinery is needed and much hard labor combined with it to make a good living. Make your preparations for seeding down a good big acreage to Brome grass, or some other good grass.

SUPPORT HOME MANUFACTURE



CANADIAN-MADE HAND SEPARATORS

Turns easy. Open bowl. Well finished. Most durable. Price reasonable. Best investment farmers can make. Catalogue free.

DAIRY SUPPLIES OF EVERY DESCRIPTION.

Genuine Parchment Paper, for lb. prints, neatly and tastefully printed. By mail, post-paid. Prices reasonable.

No. 9. Canadian Ideal. Cap. 30 gals. per hour.

able. Write us. Satisfaction guaranteed. JOHN S. PEARCE & CO., London, Ont.

The Latest!

Patented July, 1898.

WEBBER'S HYDRO-LACTIC Cream Separator



THOROUGHLY TESTED.

THE MOST ECONOMICAL.

THE CHEAPEST.

THE BEST.

Think of it! A Cream Separator for

\$12 TO \$18

that will do the work of a \$90 machine.

Write for Circulars.

J. O. CADHAM, Portage la Prairie.

Manuf'g and Sole Agent for Man. & N.W.T.

COLD STORAGE BUILDERS.

For Creameries, Dairymen and Butchers. References—C. C. McDonald, Dairy Inspector, and Ald. T. Cowan, Winnipeg. Prices given on application.

G. T. LAIRD, 214 James St., Winnipeg.

CALIFORNIA IRRIGATED FRUIT LANDS FOR SALE IN SMALL TRACTS.

In RICHFIELD

LAND AND IRRIGATION COLONY.

TEHAMA COUNTY, CALIFORNIA.

If you want to buy a 10 or 20-acre tract of No. 1 Fruit, Vegetable or Alfalfa Hay land, we can furnish it to you on terms to suit you. This is your chance to take out an insurance policy against lock-outs, financial depressions, ill-health and want. It is within the reach of all. Those desiring to go to California, the land of sunshine and flowers, health and happiness, will do well to consult us before going. Write for Catalogue.

HOUGHTON & BARHAM, 414 PARK BUILDING, PITTSBURG, PA.

When writing advertisers, kindly mention The Nor-West Farmer.

LITTLE'S PATENT FLUID SHEEP DIP AND CATTLE WASH.

The Original Non-Poisonous Fluid Dip

Still the Favorite Dip, as proved by the testimony of our Minister of Agriculture and other large Breeders.

FOR SHEEP.

Kills Ticks, Maggots; Cures Scabs, Heals Old Sores, Wounds, etc., and greatly increases and improves growth of Wool.

CATTLE, HORSES, PIGS, Etc.

Cleanses the skin from all insects, and makes the coat beautifully soft and glossy.

Prevents the attack of Warble Fly.

Heals Saddle Galls, Sore Shoulders, Ulcers, etc. Keeps Animals Free from Infection.

NO DANGER, SAFE, CHEAP AND EFFECTIVE.

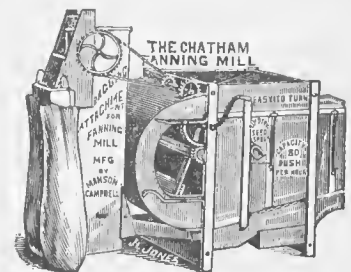
BEWARE OF IMITATIONS.

Sold in large tins at 75 Cents. Sufficient in each to make from 25 to 40 gallons of wash, according to strength required. Special terms to Breeders, Ranchmen, and others requiring large quantities.

SOLD BY ALL DRUGGISTS. SEND FOR PAMPHLET.

ROBERT WIGHTMAN, Druggist, Owen Sound.

Sole Agent for the Dominion. 1874



THE IMPORTANCE OF GOOD SEED.

Professor Robertson, in speaking recently before the Dominion House of Commons' Committee on Agriculture on the great advantage of choice selected seed for the production of greater crops, referred to the vigorous use of the FANNING MILL as a means of securing this result. Such advice, coming from the Professor, will doubtless stimulate action in this direction, with much profit to those who practice the valuable plans which he recommends. Our aim has been to make the best cleaner, separator and grader possible, and also a Mill that will perform all work of this kind in the quickest time with the greatest ease. If you desire such a Fanning Mill, write us for full information.

THE M. CAMPBELL FANNING MILL CO., LTD., CHATHAM, ONT.



HOME SPECIALTY CO. Dept. 142, TORONTO, CAN.

When writing advertisers, kindly mention The Nor-West Farmer.

Live Stock Impounded

Lost.

Balgonie, Assa.—Clyde mare, 2-yrs.-old, light grey, small irregular brand on neck. Reward.—W. H. Johnston.

Balmoral, Man.—One black 3-year-old colt, with small sleigh-bell on; one black 2-year-old filly; one bay yearling filly, with white stripe on face; one 2-year-old dark bay horse. Reward.—John Kirkup.

Chater, Man.—A red and white yearling heifer.—D. Kinney, 30, 10, 17.

Cypress River, Man.—One roan filly, three years old; one bay filly, one year old.—Jas. Chewings.

Elkhorn, Man.—One black colt, 2-yrs.-old star on forehead.—Jas. Jones.

Hun's Valley, Man.—One bay mare, white fetlock, shows firing on hind fetlock; one bay filly, with star on forehead, running with mare. Reward.—E. L. Parsons.

Indian Head, Assa.—One roan gelding, 4-years-old, white face and left front foot.—J. M. McLeod, Box 58.

McGregor, Man.—Seven yearling heifers, 6 red, one light red and white, one of them a muley. Dark heifer carrying small bell. Last heard of May 19th six miles south of Bagot. \$5 reward to any one to keep them and notify me or return them.—C. H. Stephenson.

Neepawa, Man.—One bay roan pony, white legs and face.—Jas. McWade, S.E. 14, 15, 16.

St. Alphonse, Man.—One bay mare, white face, 10 years old, halter on head, branded N; one yearling filly, white face and leg.—A. Gagnon.

St. Andrew, Assa.—One bay mare, 8-yrs.-old, weight about 1,150, branded F on left shoulder; one 2-year-old bay colt and one small pony, roan, 4-yrs.-old. Reward.—Alex. McDonald, 24, 14, 1W2.

Weyburn, Man.—One roan gelding, 7-yrs.-old, white face, weighs 1,400, branded on left shoulder; one bay gelding, 6-yrs.-old, 1,150 lbs, branded II on left shoulder.—Geo. Davis.

Impounded.

Stanley, Man. (Munic.)—One pony mare, color steel gray, 3 or 4 years old, left side and back scarred by saddle, tail cut square.—John Broadbent, 8, 3, 6W.

Estray.

Battleford, Sask.—One gelding, about 7 years old, brown, about 950 lbs., star on face extending over left eye, stripe from star to nostrils, indistinct combination JH on left shoulder.—J. M. Skelton.

Bresaylor, Sask.—One stallion, 2 or 3 years old, iron grey, stripe down face, hind feet white, JM on left shoulder.—Geo. Spence.

Fort Qu'Appelle, Assa.—One pony horse, 5-yrs.-old, bay, star on forehead.—R. Shore.

Hillesden, Assa.—One bull, about 4 years old, red and white.—Wm. Dixon.

Indian Head, Assa.—One mare, about 5 years, roan, black points, 45 on right hip.—J. Thompson.

Indian Head, Assa.—One pony mare, black, 14 hands, white face; pony mare, bay, white face, white eyes, left hind foot white.—J. T. Bowden.

Innisfail, Alta.—One cayuse, mare, bay, white face, spot on neck, white hind foot, colt at side.—James E. Fawdrey.

Katepwe, Assa.—One yearling steer, reddish brown, white belly.—A. T. Maclellan.

Langenburg, Assa.—One heifer, 2 yrs. old, red.—F. F. Lee.

Lebret, Assa.—One cow, 6 years old, red and white, K on left hip.—V. Grim-eaux.

Moose Jaw, Assa.—One stallion, about 2 years old, bay, both hind feet white, stripe down face.—M. Johnson.

Moose Jaw, Assa.—One mare, aged, bay, combination JM on left shoulder; mare, 4 or 5 years old, bay, yearling colt at side right front leg crooked; gelding, 4 yrs. old, roan, cup brand on left flank; gelding, 4-yrs.-old, bay, white face and feet, roached back; horse, 5 or 6 years old, buckskin, white face, right hind foot white; mare, brown, irregular brand on right flank, sword brand on right shoulder; horse, aged, bay, hind feet white, saddle marked, O on left flank, indistinct brand on left shoulder; pair of mules, bay and mouse color, 17 on right shoulder; mare, aged, grey, PD and cup brand on left flank.—T. Franks.

North Oxley, Alta.—One mare, white, aged, branded and vented P P on left shoulder, indistinct N L on right shoulder, about 16 hands.—C. Sharples.

Parkbeg, Assa.—One pony gelding, roan, AM on left shoulder; one pony stallion, iron grey, LD on left shoulder.—W. J. Bradshaw.

Pengarth, Assa.—One pony mare, sorrel blaze on face, hind feet white.—R. Fox.

Pheasant Forks, Assa.—One pony, rising 3 years, stallion, bay.—L. Battersby.

Rosthern, Sask.—One steer, 2-yrs.-old, red and white, irregular brand on hip.—H. Schmidt.

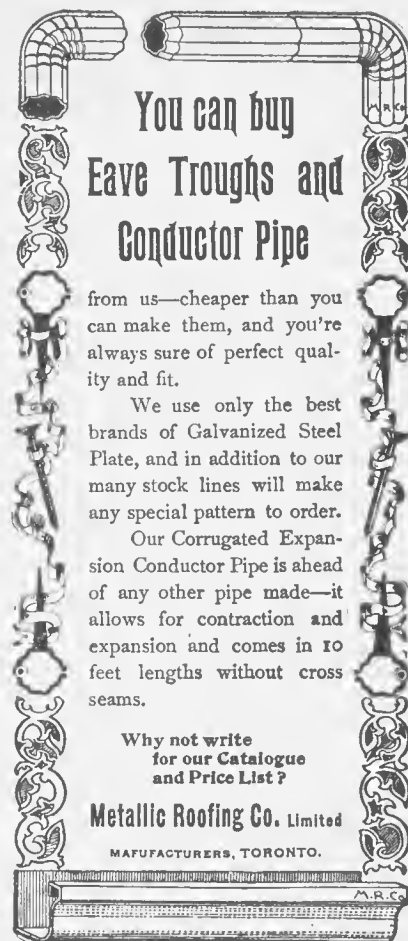
Saskatoon, Sask.—One horse, aged, bay, white hind feet, white face.—Mrs. N. J. Anderson.

Sintaluta, Assa.—One bull, rising two years old, red, white marks on head and flanks.—T. S. McLeod.

Stony Plain, Alta.—Two small geldings, light grey, legs, manes and tails black, one has shoe brand on right shoulder, about 5 or 8 years, weighs about 700 lbs.—M. McDermid.

The annual report of the Minister of Agriculture for the Dominion of Canada has been issued. Speaking of the work of the Department in regard to Arts and Agriculture, it says: "The chief matters to which attention was given in this branch, in 1898, were the cold storage service, the extension of markets, trial shipments of products, government dairy stations in the Northwest Territories, and general dairying service. The subjects which press most for further action by this department, in 1899, are the improvement of curing rooms at cheese factories, the development of a domestic and export trade in fattened poultry, the prevention, as far as possible, of the production of soft bacon, the diffusion of such information as may lead to a better state of business in the production of beef, and the establishment of simple illustration stations for farmers in localities where such are urgently needed."

Soil consists of matter—mineral, organic and vegetable, says Prof. Shutt, of the Central experimental farm. The initial step in soil formation was the disintegration of rock. This process has been going on for ages. Some time after its commencement low forms of vegetable life found place, and, decaying, started the formation of organic matter in the soil. This vegetable matter is essential in soils. Water is also a highly essential constituent, since the food of plants is taken up through their roots in solution and through their juices in circulation. The organic and mineral constituents have become so thoroughly mixed in our cultivated soils that we cannot ordinarily distinguish them. Where do plants get their food? Ordinarily from two sources, viz., the soil and the air. From the first through their roots in solution, from the latter through their leaves in the form of gasses. The greatest part of the starch and sugar are taken in from the air free of cost to us. The other essential constituents must come from the soil.



**You can buy
Eave Troughs and
Conductor Pipe**

from us—cheaper than you can make them, and you're always sure of perfect quality and fit.

We use only the best brands of Galvanized Steel Plate, and in addition to our many stock lines will make any special pattern to order.

Our Corrugated Expansion Conductor Pipe is ahead of any other pipe made—it allows for contraction and expansion and comes in 10 feet lengths without cross seams.

Why not write for our Catalogue and Price List?

Metallic Roofing Co. Limited
MANUFACTURERS, TORONTO.

THOMAS BLACK, SELLING AGENT, WINNIPEG.



Visit Us
When at the Industrial Exhibition at Winnipeg.

Our Store you will find just at the bend of Main Street, No. 496. There you will find the

**LARGEST STOCK OF
WALL PAPER**

to be found in Manitoba.

WALL PAPER, choice and so cheap you will want to paper your home throughout.

WALL PAPER superior to any you have ever seen

OUR MAMMOTH SALE NOW ON
from which you will benefit.

50,000 ROLLS to choose from.

See our exhibit at the Fair, and call at Store and see the exhibit there.

If you cannot visit us, send a post card asking for samples, state about the prices you would care to pay, and the rooms to paper.

C. B. SCANTLEBURY,
Winnipeg, Bellville, Kingston,
496 MAIN ST., WINNIPEG.



Wedding Rings

We can send Wedding Rings by return mail, as we keep a large stock on hand, prices from \$2 up, according to weight.

We recommend our

\$6.00 WEDDING RING,
as it is the best weight ever offered at the price

Andrew Co.
Jewellers,
420 MAIN ST., MCINTYRE BLK., WINNIPEG.
Please mention this paper.

When writing mention The Farmer.

THE NOR'-WEST FARMER

ISSUED TWICE A MONTH.
ESTABLISHED 1882.

The only Agricultural Paper printed in Canada between Lake Superior and the Pacific Coast, and issued on the 5th and 20th of each month.

THE STOVEL COMPANY,
PROPRIETORS.

CORNER McDERMOT AVE. AND ARTHUR ST.
WINNIPEG, MANITOBA.

SUBSCRIPTION TO Canada or the U.S., \$1 a year, in advance. To Great Britain \$1.25 (5s. sterling). Agents wanted to canvass in every locality, to whom liberal commissions will be given.

ADVERTISING RATES.

Transient advertisements, for less than three months, 15c. a line (each insertion). Terms for longer periods on application.

All advertisements estimated on the Nonpareil line—12 lines to an inch. A column contains 128 lines.

Copy for changes in advertisements should be sent in not later than the 27th and 14th of the month to ensure classified location in the next issue. Copy for new advertisements should reach the office by the 30th and 17th of each month.

TO OUR SUBSCRIBERS.

It is the intention of the publishers of this paper to admit into their columns none but reliable advertisers, and we believe that all the advertisements in this paper are from such parties. If subscribers find any of them to be otherwise, we will esteem it a favour if they will advise us, and we will at any time give our personal attention to any complaints which we receive. Always mention this paper when answering advertisements, as advertisers often advertise different things in several papers.

LETTERS.

Either on business or editorial matters, should be addressed simply "THE NOR'-WEST FARMER, P. O. Box 1810, Winnipeg," and not to any individual.

Look at Your Subscription Label.

When you pay your subscription, watch the name label on the next two issues which you receive. On the first issue following payment, it might not give the correct date—the type-setting machine may make an error and the proof not be corrected before mailing day. But if the date is not correct on the second issue please notify us by postal card.

Look at the date label now. Are you in arrears? Are you "paid up" to the end of 1899? The label will tell you. If in arrears, please renew promptly.

Subscribers who miss any of the issues of "THE NOR'-WEST FARMER" should drop us a card at once and secure same, as we want every subscriber to get every copy. Do not delay in sending, as our supply of extras sometimes becomes quickly exhausted.

WINNIPEG, JUNE 5, 1899.

RECENT LEGISLATION.

The most important legislation passed at the recent session of the Territorial Assembly, is undoubtedly the measure dealing with agricultural societies. Much dissatisfaction has existed throughout the Territories respecting the provisions of the old ordinance on the subject. The new enactment makes provision for a simpler method of organization, extends the objects of such societies and generally provides less cumbersome machinery. The main feature of the new ordinance, however, is that portion dealing with the payment of grants. It was stated in the House that the Territorial Government will in the future administer the item of \$7,000 annually voted in the aid of agricultural societies by the Dominion Government, and that added to the Territorial appropriation of \$4,000, makes a total annual amount available of \$11,000.

The proposed method of distributing this grant is briefly as follows: An amount of \$1 will be paid to societies for each paid-up member, up to a maximum of 150. It is estimated that after this item has been paid, there will still be a balance left of some \$6,000 or \$7,000, which will be divided amongst societies that have held exhibitions during the preceding year and which have collected not less than \$350, exclusive of municipal and Territorial grants, on a basis of dollar for dollar up to \$1,000. If the amount on hand is

insufficient, a pro rata apportionment is to be made. The aim of this provision is apparent and it provoked considerable discussion in the Legislature, as to the merits and demerits of small agricultural shows, which this scheme is intended to discourage. The consensus of opinion seemed to be that if a society could not raise \$350, it should not be assisted by the Government to hold an exhibition. While this is perfectly sound in principle, how will it work out in practice? Our humble opinion is, that the educational value of any show, large or small, should not be overlooked. It forms a training school for higher ideals and aspirations. Every successful and prominent exhibition, could usually at the inception of its existence have been classified as a "small show," if, of course, it attained its growth by the slow process of gradual development, characteristic of most of our sound institutions. Legislatures should not, therefore, condemn these shows. They undoubtedly have a value and serve a purpose and, in some cases, a very important one.

It is understood that the intention of the Territorial Government is to encourage institute work in connection with agricultural societies, particularly the smaller societies. This is a most laudable scheme. There can be no doubt that the sphere of usefulness of all the societies in the Territories would be considerably widened if they could be prevailed upon to take up this useful work. The new law goes into effect on the 1st of January, 1900. Certain amendments were also made in the existing ordinance, changing the date of the annual meetings, which are this year to be held during the beginning of the month of December, instead of the following spring, as heretofore.

THE NEW GRAIN INSPECTION ACT.

The bill introduced by Sir Henri Joly for the amendment of the Grain Inspection Act is now before the public, and it is as a means to the correction of defects in the working of the present methods that it should mainly be discussed. It is an embodiment of the views of the leading western dealers and western members, prepared and brought in as a Government measure. It is vehemently opposed by the eastern millers and dealers and by a small section of the western men. Their main objection is the section that makes Winnipeg inspection final. No inspector, however able and honest, can be held infallible.

The Minnesota system is justly held up as a model of thoroughness and only one car in 40 or 50 has been changed in grade within recent years. But last year everybody was up in arms against the very same inspectors. The crop, as our own experience has too fully proven, was a very difficult one to grade, and the "farmers' friends" got a grand opportunity to make political capital out of the abuse they helped to heap on the "hull gang" of inspectors and the Government board, which controlled their work, because their inspection was too severe. It now turns out that the foreign purchasers of the grain so inspected complain that the quality is not up to the standard of previous years, too indulgent inspection being blamed for the difference. It may, therefore, be presumed that the inspectors over there are as reliable as ever and their interested critics were in the wrong.

The Farmer has for years been denouncing mixing and re-inspection out of the Fort William elevators, and the new Act aims at defeating this method of making money at the expense of the country's re-

putation. Singularly enough some of the very men who had the reputation for extra skill in this business have suddenly become very zealous for the character of our wheat output. Another party who are equally zealous for the reputation of our wheat are the Ontario millers and dealers, who among them buy perhaps 5 per cent. of our total crop. Now, surely it is the producer and the producing country that is most interested in the reputation of its products, and should be the best judge of the methods of handling which are best for its interests. So long as those methods are clean and above-board, and the purchaser has the privilege of buying or refusing to buy, his right to interfere seems to us rather problematic.

Looked at from the farmer's point of view it seems to us that the arrangement for final inspection at Winnipeg is highly desirable. At present his wheat must stand Fort William inspection before he can get any advance on the security of his carload. With final inspection at Winnipeg he can get an advance on his grain from four days to a fortnight earlier than by the present method and his commission agent can sell with equal certainty.

Under the old system a farmer, say at Carnduff, might sell a car of 1 hard, and it might reach Fort William in a fortnight, there to be graded 2 hard. It must be emptied at once and its identity lost. The producer must take that rate because there is no opportunity for re-survey. Under the new system the car is graded at Winnipeg and sent on. But a re-survey can be called for by the seller and the case decided by the board of appeal before that car reaches Fort William and all the heart-burning incident to the old system will be avoided.

Nobody ventures to question the fitness of the Winnipeg inspector for the trust the western men are desirous to put into his hands, and the certainty that his awards will be jealously watched will do its own share in keeping him up to the standard of ability and impartiality he at present enjoys. There has been no side fat within his reach and there can be none in the future to tempt him to partiality. It is quite natural that Fort William interests should rebel against a measure that withdraws from it advantages to which it has no inherent right. The question belongs to the west and as the great mass of our exports goes to Europe the eastern men must give way to the inevitable, and if dissatisfied can combine to buy here on their own account through agents of their own appointment.

"But," say some, "look at that mixing elevator at Winnipeg." It certainly is a mixing elevator. It cleans up and makes fit for outside markets much stuff that in its original state we have good reason to be ashamed of, and in doing so it only does what every other elevator is doing and should do if the reputation of our grain on foreign markets is to be sustained. In Minnesota, for example, the average dockage, made up from unquestionably accurate data, is about thirty ounces to the bushel. Ours runs up in most cases to five, ten, fifteen pounds and there are cases on record where over fifteen pounds of dirt have been taken out of a bushel of wheat before it was fit to send to the ultimate market. There are other points in our past history not necessary to be here specified, that lead us to think that in the main the new inspection Act will be found advantageous to the farmers of the west and in their interest we are prepared to welcome it.

—It is reported that the Manitoba cattle taken west last fall by Gordon & Ironside and others, have wintered on the ranges as well as the native bred stock.

EXPERIMENTAL FARM REPORTS, 1898.

The Dominion Experimental Farm Report for 1898 is just out and as full as ever of valuable information. Only those familiar with these reports as they have been issued from year to year can have any idea of the value to the Dominion at large of the work done on its experiment stations and the quality of the men to whom that work has been entrusted. The experiments, properly so called, have been thoroughly practical and continued from year to year along lines that many a first-rate working farmer would be glad to try on his own account, but could not spare the time to do them proper justice. Even the more purely scientific work is strictly practical in its bearing. The gentlemen responsible for each department of this report are careful to put what they have to tell in the most concise terms. No verbiage to pad out what is lacking in substance, just enough said to do justice to the matter in hand and no more.

Besides their office and station duties, the members of the staff are among the most popular speakers at the provincial institutes, and so popularise in an attractive manner the best results of their work. There are no more popular public figures in the west than Messrs. Bedford and Mackay, and every one who visits their stations can testify to the interest and value of their work, and the courtesy and ability, both of themselves and their subordinates. The ten annual volumes of these reports are the most valuable farming library any farmer can possess. We have marked for future use a few paragraphs of special interest, but every one of its 430 pages is of special interest and the man who can secure the whole volume is fortunate indeed.

Much as we value this report, we still feel it would have been still more valuable to those for whose benefit it is mainly meant had it been put in their hands three, or even two months ago. It is some improvement on earlier methods that portions of the information here set forth have been already before the public in one form or other, but if the business of preparation, editing and publishing could be got through, and the reports in the hands of farmers by the end of February, the lessons of last year's experience would be studied and corresponding action taken the same season. When sent out in the middle of May, its teachings come too late and not one farmer in ten can spare the time to study them.

Having failed to be of use to him when he was looking for information the report is thrown aside and probably is never thoroughly studied. Then, too, the work reported upon is apt to be judged by the farmer as being in the same category as the report—behind time. It will cost no more to get out the report earlier and the more favorable impression it would make of the practical business ability of the Government as well as its actual value to farmers should be sufficient inducement to have the report of 1899 in every farmer's hands very early in the new year.

—In a snowstorm that took place in the Maple Creek district the first week of May, a shepherd called Blair showed great pluck and endurance. The sheep drifted before the storm, and though only lightly clad he stayed with them for fully three days and nights. He could distinguish no land marks, and was starving with cold and hunger, but with the help of his dog he stood it out till parties sent out to search for him picked him up. His dog was as good as himself and not a sheep was missing. Such fidelity well deserves notice and approval.

—How is it that every now and then we come across men that came into the country 15 or 20 years ago, some of them with hardly a second shirt, that are now patterns of successful industry? One main reason is that being poor they had no chance to throw away money and had the chance to earn wages and experience, while better-off starters were working very much by guess, and as a natural consequence, getting embarrassed.

—The dates have recently been fixed for the "Calgary Industrial Fair," which opens on the 4th of September (Labor Day), and will likely cover three or four days. Mr. F. Van Thiel, of Calgary, has been appointed secretary and has taken hold of his work in a most energetic manner. Arrangements have been made whereby all the Agricultural Societies in the vicinity of Calgary join with the Calgary organization in the forthcoming exhibition, which under the circumstances, can hardly fail to be a success.

—The proposal to bonus a new grist mill at Carberry to the extent of \$3,000 has been carried by a majority that can leave no doubt as to the views of the community on the subject. Nearly every available vote was polled in favor of the measure and only 5 per cent. voted in opposition. The local government has very properly set its face against the indiscriminate bonusing of country mills, but in this case it is understood that it will offer no opposition and the measure will be allowed to go through the house.

—A. G. Hopkins, V.S., late of Neepawa, who is billed as a speaker at the forthcoming Farmers' Institutes, has received from the Board of Regents of the University of Wisconsin, the appointment of instructor in veterinary science and practice at the agricultural station of that state. Within the last few years Mr. Hopkins has gone through a course of study at Guelph, Ont., at Ames, Iowa, and later at the McKillop Veterinary College, Chicago. The Farmer wishes Dr. Hopkins every success in his new position.

—The annual report of the Minister of the Interior, presented to parliament on May 16th, showed a very special increase of farming immigrants in the year 1898. The number of homestead entries was 4,848, which is double the entries for '97, and treble those of '96. The boom year of 1883 is the only one that equalled last year's record. The land sales made by railway companies in '98 showed a corresponding increase. They totalled 473,789 acres, valued at \$1,354,908, against 222,545, worth \$719,336 for 1897, which year showed double the sales made in any previous year.

—It is reported that Sir William Van Horne, of the C.P.R., is going to establish a farm near East Selkirk, 26 miles from Winnipeg. We understand he proposes erecting firstclass barn buildings and a fine residence for his son, under whose personal supervision the farm operations will be conducted. If this is to be carried out The Farmer would like to see the buildings erected in full view of all passing trains, so that the large number of tourists, etc., entering the great west via the C.P.R. may receive a good impression of the country. In this connection it might not be amiss to change the name of East Selkirk, which conflicts more or less with West Selkirk, to the name given to the farm.

—Every fresh strike furnishes an incentive to the invention of mechanism by

which the services of discontented workmen can be dispensed with. The grain shovellers' strike is hardly yet settled and on the back of it comes the news that a 1,000,000 bushel elevator will be built at Buffalo with a system of pneumatic tubes by means of which the largest vessels can be discharged in a very short time. The drawings show four main tubes, to which small flexible tubes can be attached and the whole worked up to close on 25,000 bushels an hour, requiring very little attendance. The action of the air will be very useful in its effect on the grain. Existing elevators can be fitted with similar apparatus, which is said to be in operation at one or two points in England.

—The wide-awake farmer will be keeping his eye pretty closely upon his fields about this time of the year. This is a good time to discover any new foes in the way of weeds which may have crept in during the past year. Threshing grounds especially are apt to produce some unwelcome developments, and a little attention the first season may save the proverbial "nine stitches" in years to follow. The foul seed is insidious—it delights in filling the soil of the farmer who never watches his fields during growing time, and it always comes prepared to stay. Be on the safe side. Take no chances. If there is any plant showing up which you do not know to be harmless, then find out what it is. A specimen plant sent to Dr. James Fletcher, Central Experiment Farm, Ottawa, will be identified, and you will be told whether it is harmful or not.

—A movement is on foot to secure outside judges for the cattle exhibit in connection with the Territorial summer shows at Regina and Indian Head. It is understood that the Regina Department of Agriculture has offered to make the necessary arrangements. This is a move in the right direction. Until the services of wholly impartial and capable judges are available, the educational value of our agricultural shows will never reach a very high standard. The decision of a judge should be accepted without hesitation; but unless the exhibitor has implicit confidence in his impartiality, it would be expecting a little too much of human nature to look for unconditional submission to his ruling on the part of the public as well as the disappointed exhibitor, hence the unseemly scenes which have in the past disgraced one or two of our rural shows. Public funds are largely expended upon these exhibitions and it behooves the respective governments to see that value is received for these expenditures. There can be no doubt, that government supervision to the extent of controlling the judging in the most important classes would have a salutary effect, and The Farmer is inclined to the belief that this is a matter which might well engage the attention of the "powers that be."

Robert Wemyss, of Reaburn, a valued contributor to the pages of The Nor'-West Farmer, is laid up with a stroke of paralysis.

Through the efforts of the Department of Agriculture at Regina, arrangements have been made for a series of meetings throughout Eastern Assiniboia during the present month, to be addressed by Prof. Fletcher, of Ottawa. The meetings are to be held in the interest of noxious weed eradication. It is understood that Prof. Fletcher will be accompanied by Mr. Bulyea, the minister in charge of agricultural affairs in the west. The first meeting will probably be held at Moosomin, and the Professor will then address the farmers along the main line as far west as Moose Jaw. The Cannington Manor and Souris districts will also be visited.



While our columns are always open for the discussion of any relevant subject, we do not necessarily indorse the opinions of all contributors. Correspondents will kindly write on one side of the sheet only and in every case give the name—not necessarily for publication, but as a guarantee of good faith. All correspondence will be subject to revision.

Cattle Brands in Manitoba.

J. H. S., Cordova: "Is there a registry for cattle brands in Manitoba, and, if so, who is the proper authority to whom to apply? If brands are registered, please give regulations in connection therewith."

Answer.—At the last session of the Manitoba Legislature a bill providing for the registry of cattle brands was introduced, but not passed. The work will be in the hands of the Department of Agriculture. Several applications for allotment of brands have been received, but nothing can be done until the Act passes the house when it meets on June 15th.

Clay in Concrete.

Conerete, Red Deer, Assa: "I think a slow setting concrete can be made of lime and sand, or lime, sand and gravel. Could this be helped out by the addition of clay from our hard clay subsoil? If so, please give instructions and proportions for rough walls and floors. In England I have seen very fair walls for hovels and outbuildings, which stood for many years made simply of road dirt—the scrapings of the country roads, where the soil was a stiff clay, and the macadam used, a lime stone. It is useless thinking of cement in a country where we pay 50 cents a gallon for coal oil, of a grade that retails in England at the small shops at 12 or 16 cents."

Answer by a Concrete Builder.—It is quite true that in some parts of England "cob" walls have done excellent service and this enquirer is perhaps not aware that German immigrants have at different points in the west built capital warm stables and dwelling houses of a mixture of short straw or hay, with tough mud, trodden into consistency, by oxen. Stones are frequently mixed into such walls. Perhaps some subscriber near Qu'Appelle may be able to tell us what satisfaction buildings so done years ago in that neighborhood are now giving. But it is a part of the creed of all cement builders that clay is a very bad thing to have in concrete. Don't use any of it. Clean washed sand and stones are indispensable to permanent success. Lime mortar may be too expensive with you just yet, but the policy of wisdom is to try and use the likeliest materials within reach, whether they be mud, logs or more costly articles.

Wild Oats.

C. W. R., Katepwe, sends us a sample of his oats and wants to know if it is poverty of soil that causes excess of awn on the white ones and if the black ones are wild oats. We think the black oats are wild ones. The spiral awn tends to prove this, but the characteristic fuzziness at the other end of the grain is wanting. "Reversion to type" is a doctrine of science and careless growing of poor seed is no doubt accountable for the awns on the white oats. Rank growth of straw may help. Clean some seed, if only a bushel, most thoroughly, sow on clean soil and you will soon have enough good seed to sow all you want to.

Prospects Good at Edmonton.

Under date of June 2nd, Robt. Mitchell, Edmonton, reports: "There has been plenty of rain lately, and if present prospects hold good, there will be good crops this season. Wheat that has been drilled on well prepared land is from 4 to 6 inches high, while oats are doing splendidly. Weeds are one of the great difficulties the farmer has to contend with, but I have found that if summerfallowing is done about the 20th of June and after that well cultivated, most of the weeds will be destroyed. From the results of Brome grass grown on small plots, I am convinced that it will do well in this part of the country, and have sown five acres."

Scare Legislation and How it Affects the Northwest.

John Renton, Deloraine, Man., writes: "Under the above heading you have an article on the San Jose scale bill. With the most of what you say I can quite agree. You say so far as the legislation affected Manitoba and the Northwest it was a decided blunder. Allow me to say that there are many who do not hesitate to make use of a stronger word. They say so far as this country is concerned, that it is a fraud. They also say it is just playing into the hands of the Ontario nurserymen, and I must admit that it appears a good deal like it, for I have not seen one good reason why Minnesota and Dakota nursery stock should not be admitted under certain conditions into Manitoba and the Northwest. I cannot understand what the western members were doing when they allowed this bill to pass. But our masters at Ottawa are going to allow us to bring in a few cottonwood trees. Wonderful condescension!! I thought, Mr. Editor, that we had a Liberal government at Ottawa. It seems not, something has gone wrong. If not, then, instead of throwing obstacles in the way of tree planting they should have been ready to assist and encourage every settler to plant trees, for anyone who knows anything about this country must know that there is nothing that will so improve the appearance of this country as to plant trees. While trees may truly be called things of beauty and a joy for ever, they serve other good purposes, they break the terribly, destructive winds, and they not only draw moisture, but they assist in retaining the moisture. I see that you advise that people should write to their re-

presentatives at Ottawa urging the prompt repeal of this statute so far as Manitoba and the Territories are concerned. I think so far as the members and the Minister of Agriculture are concerned their attention has been called to this matter so that if they refuse to take action, it is not through ignorance of the people's wishes. But by all means write and keep writing until justice is done to the people."

Gopher Poison.

A correspondent from Franklin asks "(1). What is your opinion as to the best way of putting out strychnine for gophers? (2). Would it be in violation of the law to use such poison, supposing it were dropped down the holes?"

Answer.—1. There are several good ways of putting out poison for gophers. One of the best is to take potatoes about the size of a walnut, make a cut in them with a knife, press it open, put in about as much strychnine as the size of a small grain of wheat, and allow the potato to close up on it. Some use a quill, run it into the potato, pull it out with a piece of the potato, put in the strychnine, then shove the piece out of the quill and replace on top of the strychnine. If the potatoes are put in their holes there will be no more gophers seen. Another plan—Take a quart can, put in it one-third of a bottle of strychnine, fill one-third full with corn, add water until two-thirds full, allow to stand for a few days, stirring occasionally, and of course keeping it out of the way of children and all animals. Gophers like grain that has been softened by the moist soil, so then when the grain is soft put a few grains into each gopher hole you can find. For pocket gophers, open their holes and put either the potato or corn well back in their burrows and close up again.

Carbon bisulphide has been used most successfully in exterminating these pests. Saturate a bunch of cotton batten about the size of a walnut with the liquid and place it as far into the hole as possible, then cover closely so that the fumes of the bisulphide will penetrate to every part of the burrow. They are deadly and will kill other animals that burrow in the ground such as rats. The vapor should not be inhaled and the bottle should be kept below the level of the nose as the fumes are heavy and sink. It is also very inflammable and must be kept away from fire.

2. Each municipal council makes its own law about putting out gopher poi-

PASTEUR VACCINE

Is the Original and Successful Preventive Remedy for

BLACK LEG.

Write for particulars, official endorsements of our Vaccine and testimonials from thousands of stockmen who have used PASTEUR Vaccine upon nearly one million head in the United States and Canada during the last three and a half years, and prevented losses from Black Leg. "Single" Vaccine or "Double" Vaccine, as preferred.

PASTEUR VACCINE CO. - - 59 FIFTH AVENUE, CHICAGO.

OGILVIE'S

Wheat Granules

Whole Wheat Flour

HIGHLY RECOMMENDED.

DELIGHTFUL BREAKFAST FOOD.

In 8-lb. Packages.

Makes Delicious PANCAKES.

In 8-lb. Packages.

son, so you will have to find the answer to this question yourself, but we would think that putting it well into the holes will answer all requirements. The greatest care must always be observed in handling strychnine, or in having poisoned bait lying around on the surface of the ground.

Windmill vs. Gasoline Engine.

F. D., Neepawa, Man.: "Which do you consider the best power to use about a barn, a windmill or a gasoline engine? What is the comparative cost of each, and do you know of any farmers who are using the latter? I have heard that they make a nice cheap, even power and they never wear out when not in use."

Answer.—We know of no farmer using a gasoline engine in Manitoba but quite a number are in use in Ontario and the U.S. They are growing in favor for farm work because, while more expensive to begin with, they cost but little to run and are always ready. For work that requires to be done at a given time each day, such as running a cream separator, it furnishes a very satisfactory power. We understand that a horse power engine can be had in Winnipeg for from \$100 to \$150; a 2-horse, about \$200; a 3-horse, about \$250; a 4-horse, about \$275, and a 6-horse-power one, about \$325. One big disadvantage in their introduction is that put into a barn or other outbuilding it will double the insurance rates, and if a separate building has to be built, necessitating extra shafting, etc., the cost of a gasoline engine comes so high that it is almost out of the reach of a farmer. A small boiler and engine can be obtained for a very small sum for use in the dairy and is more satisfactory than a gasoline engine.

For use on a barn for cutting feed, grinding grain, pumping, etc., we know of no power so suitable as a good geared mill. A 12 ft. geared mill, with the necessary shafting and foot gear, can be had in Winnipeg for about \$110, or with a post grinder, for \$125. In a 15-mile wind such a mill will develop two-horse power. A 14-ft. wheel, with shafting, etc., \$150, or with grinder, \$165, horse-power, about 4. A 16-ft. wheel costs well up to \$200, and develops 6-h. power, and more, according to the wind. The trouble with windmills is that they blow down, but if put up on a solid mast, high enough to be free of cross currents from the roof, they will outlive any wind but a cyclone. Then, too, the wind is not always to be depended upon and a man has to be "fore-handed" with his work. Taking everything into consideration, The Farmer is in favor of the windmill.

Well Drills and Hail Insurance.

D. Girard, Ellerslie, Alta.: "Kindly give me the address of a firm manufacturing well drills and also the address of the Manitoba Hail and Storm Insurance Co. Do they do business in the Northwest Territories?"

Answer.—R. McDougall & Co., Galt, Ont., manufacture well drills. No company of the name you mention is registered with the Territorial Government at Regina, nor is there a Company by that name doing business in Manitoba. See also page 26, Jan. 5th issue, and 50, of Jan. 20th issue, 1899, for answer to rest of your question.

Concrete Building.

Norval B. Hagar writes: "In your issue of April 20th I notice that Charles J. Drake, of Two Creeks, takes exception to some of the statements I made in my letter of March 20th, on Concrete Building. I would have answered his letter before, but as I had never been in Manitoba to

stay, having merely passed through, and, as I intended to be here for three or four months, I thought I would wait until I had covered the best part of it and seen for myself the cost of the different materials for building purposes before answering it. I have now been through the principal parts of Manitoba and am prepared to make the statement that, in nine cases out of ten, a cement concrete house can be built cheaper than with either brick, stone or wood, and be warmer and more durable as well. I am prepared to back up my statement that, everything being equal, that is, where stone, brick and gravel are to draw the same distance, I can build a cheaper house here in Manitoba with cement concrete, even if I have to pay the freight on cement from Welland County, Ont. Where gravel is plentiful and brick and stone are scarce, I can build a cement concrete house for one third to one half cheaper and better than of other materials, for I, like Mr. Drake, believe that concrete has the eight different advantages over brick, stone or wood which he mentions.

"Mr. Drake makes the comparison between cement concrete and lime concrete, with the saving in cost in favor of lime, and goes on to say: 'Whether it would at the end of a thousand years be, as lime concrete has been found to be at that age, as hard as, or harder, than rock, remains yet to be proved in our experience of hydraulic cement extending only over 50 years.' He still further says: 'There are many descriptions of concrete work for which lime is of little or no use, such as floors, stairs, water tanks, culverts, etc.' By taking Mr. Drake's own statement that lime concrete is of little or no use where it comes in contact with water or continual wear, it must surely be an inferior article as a building material. On the other hand, cement concrete properly made and put in, will last for ages and will stand any climate, either heat or cold, wet or dry, and will eventually become as hard as the stone in any of them."

How to Cure Jackfish.

Wm. Dunfield, Dauphin, Man.: "Let the man or boy who catches them have a good jack knife with him, and while he is having the fun of fishing, let him have the trouble of cleaning them as well. It can be done very easily by the water's edge. First cut off the heads, then clean them out and wash well, then split them close beside the backbone, so that they will spread out flat. When you get home rub salt all over each one. Let them lie until morning, then rub the slime off and spread them in the sun on a board or on the wood pile to dry. Put them away in sacks during the night and spread out again to dry the next day. Repeat until dry enough to keep anywhere in the house piled up."

Keep your eye on your neighbor, for you are much more liable to see your own mistakes in him than yourself.

A government boring outfit at Beaver Creek struck water at 115 feet in such abundance that it rose 75 feet before the drill could be drawn out.

It is doubtful economy to get a large crop of weeds in order to have them to plow under for fertility. It takes some fertility to grow weeds in the first place.

It is reported that the clover crop of Southern Wisconsin is a total failure. Last season the farmers secured a good "catch" for the first time in several years, and the failure of it this spring will be severely felt. Farmers are meeting the loss by sowing oats, barley, oats and peas, and later millet and corn, as supplementary feeds to help out the pastures.

Preserving Soil Moisture.

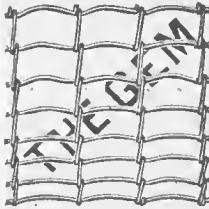
We do not appreciate the value of cultivation in preserving moisture in the soil. The following results of experiments in preserving moisture at the Kansas Experiment Station will be of special interest to Manitoba farmers, because the rainfall is even lighter in Kansas than it is here. The experiments show that the good effects of a mulch can be obtained by proper tillage of the soil, and it would be well if farmers would act upon it.

One of the station fields containing, in round numbers, 26 per cent. of water in the first foot of soil, on July 7, 1898, had one portion plowed, another disc-harrowed and a portion left untreated. The ensuing dry weather in the course of four weeks, notwithstanding several light rains, reduced the moisture of the untreated part to 15 per cent. and that of the disc'd land to 18 per cent., the plowed ground retaining 21 per cent. The last two were in excellent condition for seeding, while the first would plow up lumpy and unsatisfactory. The weight of water in an acre of the dry soil to the depth of one foot may be taken as 1,600 tons. Each per cent. of water in soil to that depth represents about sixteen tons of water per acre, or one-seventh of an inch. The water apparently lost by the untreated soil was 176 tons per acre, equivalent to over one and one-half inches of rain. This is about one-half what the soil would hold after a soaking rain. The real loss was much more than this, since as water escaped from the upper foot, other would be drawn up from below by capillary attraction. The figures given are minimum quantities, therefore.

The lesson in this is that moisture will be preserved if the land intended for summer fallow gets early treatment. If it cannot be plowed a few rounds with the disc harrow will be of great value in retarding the evaporation of moisture, thus rendering the land more easily plowed, more suitable for germinating weed seeds, and, if the after cultivation is properly done, more certain of giving a good crop the following year.

A law is in force in New Brunswick now compelling all wagons with a load weighing over 3,000 lbs. to have tires 4 inches in width. When buying a new wagon get one with a wide tire.

Take a good team and sprinkling tank and haul water one-fourth of a mile. Work a week as hard as you can. What does your week's work represent? Just the difference in evaporation between a soil cultivated and one not cultivated. Two hours' good work with a two-horse cultivator will represent as much water as a week's work with team and sprinkler. — Rural New Yorker.



FENCE MACHINE

is especially adapted for fencing in the Northwest. It will weave on any kind of wire, including barb, will weave heavier wire and more in a day than any other machine made. **PRICE \$5.**

Call on
M. A. FERRIS, P. LA PRAIRIE, AGENT.
Or write, MCGREGOR, BARNWELL & CO.,
WINDSOR, ONT.

POINTS IN EVIDENCE.

It is not what we say about OUR photos, but what they say for themselves, that gives us pride in our work.

When you get one of our Platino Photos you have a picture of which you may be proud.

PARKIN'S STUDIO,
490 Main Street, WINNIPEG.

Market Review.

Winnipeg, June 6th, 1899.

Despite the unfavorable spring the crop outlook is a very bright one. Growth has been very rapid and there is sufficient moisture in the soil to ensure successful crops. The Red River Valley does not share in this generally hopeful outlook, as the continual wet weather has delayed a good deal of seeding. Farm lands continue in good demand and large numbers of new settlers continue to arrive. American farm implements for fall sale have advanced 15 to 20 per cent. in price. Winnipeg implement men report a big movement of implements. No change has been made in binder twine prices at Winnipeg, but the American market seems to have an easier feeling.

Wheat.

For the last few days wheat has been on the ascending scale at Chicago, owing mainly to discouraging reports from the main points of production. Yesterday morning July wheat stood at 78½c. at Chicago, to-day at noon it is only 76½c. This is partly due to an increase of over two million bushels in the visible supply. Liverpool opened this morning 1½c. below yesterday and the chances of advance seem now rather discouraging.

About 60 cents was the local rate last week, but one country paper reports an offer of a few cents more than that. For grain that started right the weather has been rather favorable to growth. In some places, especially east of the Red River, excessive rains have retarded seeding and growth as well.

Reports have come in from some points that "tough" seed has failed to give satisfactory germination. On the higher ground it has done well enough, but on low, wet ground it died out. This is exactly what all previous experience has shown. Air and sunheat cannot penetrate wet ground and the plants from wet seed sicken and die. Dry seed can stand more discouragement, and will respond to good weather when it does come. Our counsel to sell tough wheat and sow strictly dry seed is the only safe one for wet or cold weather.

Returns of last week reported 144 cars of wheat inspected—compared with 215 cars the previous week—which graded as follows: 1 hard, 57 cars; 2 hard, 10; 3 hard, 0; 1 northern, 42; 2 northern, 1; 3 northern, 2; 1 spring, 0; rejected, 2; no grade, 30 cars.

Oats

Oats seem growing scarcer all the time. They are now worth 42 cents on the track at Winnipeg.

Barley.

Is also scarce. There has been a little local demand at Winnipeg for seeding purposes and it was worth on track 38c. for feed.

Flour.

Flour, in sympathy with the quickening of wheat, rose 10c. a bag. Ogilvie's quoted Hungarian patent, \$2.00; Glenora, \$1.80; Manitoba strong bakers, \$1.50; Lake of the Woods patent, \$1.90; strong bakers, \$1.70; second bakers, \$1.35; XXXX, \$1.10 per sack of 98 pounds. Discount of 5c. per sack to cash buyers.

Millfeed.

We quote prices as follows: Bran, \$10; shorts, \$12.

Cattle.

The market is a little easier than when last reported. The trade is all in butchers' cattle, which run all the way from 3c. to 4½c. The general run of the market for good stuff is 4c. to 4½. Fancy stock will bring 5c., but it has to be extra good. These values are so far above an export

basis that nothing in this way is being done. Export steers at Toronto are worth \$4.80 to \$5 per cwt., and about twenty-five cents more at Montreal. Dressed beef, choice, 6½c to 7c. per lb.

Stockers are still in demand at good figures.

Milch cows sell readily at from \$30 to \$40. Calves at from 7c. to 9c. dressed, according to quality.

Sheep.

Supplies are being brought in from Ontario and Quebec as there are hardly any to be had here. These supplies cost close up to 6c. a pound laid down in Winnipeg. Local stock might not bring that much, but are worth over 5c. a pound alive and about 11c. to 11½c. a pound dressed.

Hogs.

Offerings from farmers have been more liberal of late, but supplies enough to meet the trade have not been as yet forthcoming. Prices range according to quality, from 4½c. to 4¾c., delivered in Winnipeg.

Butter and Cheese.

Creamery Butter.—The creameries are beginning to place their early makes on the market. Some few are selling at the factory as low as 16c., while others are sending it forward on consignment. Dealers say they expect to buy full grass make next week at lower rates. Owing to the change from fodder to grass the butter made so far is not as readily saleable as straight grass make. At Montreal creamery is worth from 16c. to 17½c. and at Vancouver jobbers are paying 19c.

Dairy Butter.—Finest goods sell readily, but second grade are a drug on the market and worth 10c. or less. Separator bricks, full grass butter, will bring, delivered in Winnipeg, 15c. to 17c., while dairy rolls run up to 13c. or 14c. Fodder butter goes now at a big discount.

Cheese.—Makers seem to be following the advice of the Dairy Superintendent and holding their cheese until properly cured. Some cheese has been marketed at prices ranging from 8c. to 9c., according to quality. At Montreal new cheese is quoted at from 7½c. to 8½c., and at Vancouver, 11c. a pound.

Poultry and Eggs.

Supplies of eggs continue rather light and prices have advanced a little, 11c. to 11½c. being the price now for eggs delivered at Winnipeg, or about 13c. on a commission basis.

Chickens are scarce at 80c. to 90c. a pair, alive. Turkeys are worth 11c. alive, and 15c. a pound dressed.

Potatoes.

North Dakota growers have been taking advantage of the high price here for potatoes, and have glutted the market. Prices have dropped on the local market, from 85c. to 65c. for small lots, while for car lots, on the track at Winnipeg, the price runs as low as 50c. to 55c. Prices are likely to recover shortly.

Hides

The market is quiet and without any change. Inspected hides, No. 1, 6½c.; No. 2, 5½c.; No. 3, 4½c. Branded hides grade No. 2, and bulls, No. 3. Kip is worth 6c. to 6½c. Calf skins, 8c. Deacon skins, 25c. to 35c. each. Sheepskins and lamb-skins, 40c. to 65c. Horsehides, 50c. to 75c. each.

Wool.

Nominal, at 7c. per lb. for unwashed, coarse wool; for fine, except merino, 8c. is the going price. Market not really opened yet.

A mosquito "smudge" has burned down a stable and four horses on a farm near Morden. It caught on a haystack to start with.

Medicine Hat Stock Growers.

The annual meeting of the Medicine Hat Stock Growers' Association was held at Medicine Hat on May 6th, with a good attendance. The president congratulated the association upon the rapid increase of the cattle industry in the district, showing the great benefits to be derived from organization. There are now 104 members on the books. In 1896 the number of beef cattle exported was 902; in 1898 it had increased to 4,131, with 520 slaughtered for home consumption. The Medicine Hat district comprises 11,500 square miles of prairie, well watered. The past winter was an ideal one for stock, no losses being reported. The election of officers for the ensuing year resulted as follows:—President, Thos. Tweed; 1st Vice, R. D. Porter; 2nd Vice, W. T. Findlay; Sec.-Treas., J. H. G. Bray; Auditors, J. Cooper and T. H. Tinney. Mr. Bray was nominated as stock inspector for the district. The annual round-up started from Medicine Hat on the 25th of May. The next annual meeting will be held in April, 1900.

Caldwell Bros., of Orchard, Ont., who advertised in The Farmer having Yorkshires, Berkshires and Tamworths for sale at Dauphin, Man., called at the office this week on their way back to Ontario, to renew their advertising contract. They disposed of all their stock at fair prices.

Give the children Pompeii Castor Oil. It is sweet as honey and as cheap as the common. Put up in ½, ¼ and ½ pint bottles at 10c., 15c. and 25c. respectively. Everybody sells it. Ask for Pompeii and take no other.

THE AYLMEY Whitewashing, Spraying

Painting Machine

received the highest award at St. Petersburg, Russia; Manchester, England; Toronto and Ottawa, and 12 Diplomas throughout Ontario.

PRICES \$5 UPWARDS.

Illustrated Catalogues on application.

AGENTS WANTED.



AYLMER IRON WORKS, AYLMEY, ONT.

TREES

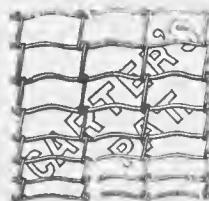
To be grown successfully need land well prepared—get ready now for next season.

Before you order your . . .

TREES or SEEDLINGS,
SHRUBS or FRUITS,

write for prices of hardy varieties to

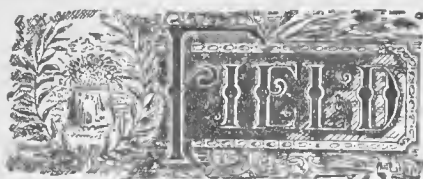
H. L. PATMORE, BRANDON NURSERY BRANDON, MAN.



Farmers

Make your own Woven Wire Fence, of any style or strength, and the actual cost will be one-half less than the best Fence ready made. Price \$15.00, complete with tools.

Fred Smith, Brandon.



Destruction of Weeds by Chemicals.

The application of chemistry to our ordinary farming operations is a departure of, comparatively speaking, recent origin. It cannot, however, be denied, that modern farming owes its most advanced methods to this science and there is on every side unmistakable evidence to lead us to the conclusion that this debt is likely to increase with enormous strides as years roll on and the results of further investigations and researches are published to the world. Experiments with sulphate of copper led to its adoption as a preventative against smut in grain and it is now within the bounds of possibility that this sulphate will yet be universally applied as a means of destroying troublesome weeds.

The weed question in Manitoba and the Territories has for years engaged the attention of every thinking person. Drastic legislation has been passed to deal with the evil and the present condition of affairs in numerous sections of the country is truly alarming. The evil has, of course, been considerably magnified by our notoriously slipshod methods of cultivation. Many cases are on record where lands, valuable by virtue of their situation and soil, have been abandoned owing to the thorough saturation of the soil by noxious weed seeds, rendering profitable farming an impossibility for years to come and the responsibility under the Provincial and Territorial laws too irksome.

Dr. Somerville, of Cockle Park, England, and other gentlemen of an inquiring turn of mind, in France and Great Britain, have of recent years carried on systematic experiments, having in view the eradication of charlock, or common mustard, by means of spraying with a two per cent. solution of sulphate of copper, and results this season have proven this method in question a complete success. Mustard has thus been destroyed completely in oats, wheat and barley fields without injuring the grain in the slightest. It has been found that plants with a broad, rough leaf like the common mustard retain the liquid until it is absorbed, while a more upright leaf with a smooth surface sheds the solution before it has time to take effect. The estimated cost of spraying an acre has been placed at from \$1.00 to \$1.50 and considering the serious loss in yield caused by aggressive weeds, it would appear that some such scheme would be well within the limits of practical farming operations. Here is an opportunity for our Experimental Farms to inaugurate a series of investigations in order to demonstrate the effectiveness or otherwise of this solution, or, in fact, any other solution, in destroying the most formidable enemies of successful farming without injury to our grain crops. It is safe to say, that favorable results would revolutionize present methods of weed destruction; and if the spraying process were found to affect the smut spores, and thus enable the farmer to consolidate the work of "bluestoning" for smut and for weeds it would, indeed, be one of the most important discoveries of recent years. This is a question of so much importance that the Departments of Agriculture at Winnipeg and Regina would be quite wise in making reliable tests themselves.

Summer Institute Meetings.

The Department of Agriculture has issued the following programme of institute meetings to be held this summer in Manitoba:—

SPEAKERS AND DATES.

Group No. 1.—C. C. Macdonald and A. G. Hopkins, V. S., Bird's Hill, June 26, 2 p.m.; Pipestone, June 28, 2 p.m.; Reston, June 28, 7 p.m.; Cypress River, June 29, 2 p.m.; Holland, June 29, 7 p.m.; Glenboro, June 30, 7 p.m.

Group No. 2.—A. P. Stevenson and Rev. W. A. Burman—Baldur, June 26, 7 p.m.; Somerset, June 27, 2 p.m.; Belmont, June 28, 7 p.m.; McGregor, July 4, 2 p.m.; Austin, July 4, 7 p.m.; Carberry, July 5, 2.30 p.m.

Group No. 3.—S. A. Bedford and N. B. Hagar—Oak Lake, June 26, 2 p.m.; Elkhorn, June 27, 2 p.m.; Virden, June 28, 2 p.m.; Arrow River, June 29, 2 p.m.; Hamiota, June 30, 2 p.m.; Birtle, July 1, 2 p.m.; Shoal Lake, July 3, 2 p.m.; Strathclair, July 4, 2 p.m.; Posen, July 6, 2 p.m.

Group No. 4.—Prof. G. E. Day and D. A. Stewart—Killarney, June 26, 7 p.m.; Cartwright, June 27, 2 p.m.; Crystal City, June 28, 2 p.m.; Pilot Mound, June 28, 7 p.m.; Manitou, June 29, 2 p.m.; Morden, June 30, 2 p.m.; Nelson, July 1, 2 p.m.; Kildonan, July 3, 7 p.m.; Neepawa, July 4, 2 p.m.; Portage la Prairie, July 5, 7 p.m.; Rosser, July 6, 2.15 p.m.

Group No. 5.—Chas. Braithwaite and S. Larcombe—Little Mountain, June 26, 7 p.m.; Balmoral, June 27, 7 p.m.; Stonewall, June 28, 2 p.m.; Beausejour, June 29, 7 p.m.; Selkirk, June 30, 2 p.m.; Emerson, July 1, 7 p.m.; St. Jean Baptiste, July 3, 2 p.m.; Morris, July 3, 7 p.m.

Group No. 6.—Isaac Usher and S. J. Thompson, V. S.; Wawanesa, June 26, 7 p.m.; Blyth, June 27, 2 p.m.; Souris, June 28, 7.30 p.m.; Hartney, June 29, 2 p.m.; Melita, June 30, 2 p.m.; Bradwardine, July 3, 2 p.m.; Oak River, July 4, 2 p.m.; Rapid City, July 5, 2 p.m.; Minnedosa, July 6, 2 p.m.

Group No. 7.—G. Harcourt and R. McKenzie—Dauphin, June 26, 7 p.m.; Glenlyon (Gilbert Plains), June 27, 2 p.m.; Gladstone, June 29, 2 p.m.; Woodlands, June 30, 2 p.m.

Special Meetings — Dr. Jas. Fletcher, Boissevain, June 14, 8 p.m.; Deloraine, June 15, 7 p.m.; Prof. J. W. Robertson, Brandon, June 6, 8 p.m.

SUBJECTS OF ADDRESSES.

Jas. Fletcher, LL. D., Botanist and Entomologist, Central Experimental Farm, Ottawa—"Special Advice to Farmers of Turtle Mountain District Regarding Rocky Mountain Locusts."

J. W. Robertson, Commissioner of Agriculture and Dairying, Ottawa—"Selection of Seed Grains."

Prof. G. E. Day, Ontario Agricultural College, Guelph, Ont.—"Experiments in Swine Feeding;" "Selection in Stock Breeding;" "Agricultural Education."

Geo. Harcourt, editor "The Nor'-West Farmer"—"Conservation of Soil Mixture;" "Dairy Herd and Stock Steers."

A. G. Hopkins, V. S., Neepawa—"Contagious Diseases of Animals, and Treatment;" "Economic Beef Production;" "Feeding of Farm Stock."

Isaac Usher, Queenston, Ont.—"Cement and Concrete for Farm Buildings."

A. P. Stevenson, Nelson—"Shelter Belts and Small Fruits."

R. McKenzie, Brandon—"Some Essentials to Success in Farming."

Rev. W. A. Burman, Winnipeg—"Noxious Weeds."

S. Larcombe, Birtle—"The Farmer's Garden."

D. A. Stewart, Pilot Mound—"Rotation of Crops."

N. B. Hagar, Thorold, Ont.—"Cement and Concrete for Farm Buildings."

S. A. Bedford, Superintendent of Experimental Farm, Brandon—"Seed and Sowing;" "Rotation of Crops;" "Cultivation of Grasses."

Charles Braithwaite, Provincial Noxious Weeds Inspector, Portage la Prairie—"Noxious Weeds."

S. J. Thompson, V. S., Provincial Veterinarian, Winnipeg—"Contagious Diseases of Animals and Treatment;" "Feeding of Farm Stock."

C. C. Macdonald, Provincial Dairy Superintendent, Winnipeg—"Dairying, Care of Milk, Packing and Marketing Butter."

ANNUAL MEETING.

Where a regularly organized farmers' institute exists the meetings announced in this programme are their annual meetings. The business of the annual meeting, election of officers, receiving annual reports, etc., can be transacted before or after addresses, as arranged by directors. Where no institute exists the meeting will be in charge of the local agricultural society.

Soil Blowing Away.

This is one of the very rare years in which almost nothing has been heard about the fine mould blowing off newly-seeded fields. After the turf of the original prairie has got rotted the exhaustion of the vegetable matter in the soil makes the land lighter and looser every year. It is from the southwest chiefly that those gales come up to carry off the fine mould from our fields, and partly to meet this difficulty farmers who rent land in Dakota are bound to seed east and west, so as to give the wind less hold. Every farmer knows that ordinary rolling does more harm than good unless there has been a good shower, not a frequent experience in seed time.

This trouble has been even worse in the States to the south of us than among ourselves, and it is no rare sight to see the road allowances piled high with the mould that has collected among the rank weeds and grass grown on the deposits of previous years. To meet this difficulty no device has been nearly so successful as the Campbell sub-surface packer, and the Experiment Station at Kansas bears special testimony to its usefulness for that purpose. It had a field that blew very badly owing to its situation and the character of the soil. Each day's plowing on this land has been closely followed by the packer, which does not smooth the land like the ordinary roller, which reduces every clod on such land to fine mould. The surface is left rough by the packer, while the furrow is squeezed together in such a way as to keep out drouth and save all the moisture possible. A heavy gale that has since blown over that land had almost no effect on it, proving the value of the implement for its intended purpose.

On the night of May 30 Moose Jaw had a rainfall of 1½ inches in 12 hours, the biggest record for nine years.

Some interesting experiments on the effect of manuring for the improvement of inferior pastures have been tried the last three years by the Bath and West of England Agricultural Society. Farm-yard manure, 15 loads to the acre, increased the bulk, but encouraged the coarser grasses. Lime, 4 tons to the acre, increased the growth of valuable grasses and Dutch clover and almost entirely cleared out the rushes and inferior grasses previously very abundant. Common salt helped the best and discouraged the worst grasses the first year, but later on no advantage was visible. Some artificial fertilizers did much good. Seeding among old grass was spoiled through drouth.

The Conservation of Soil Moisture.

This is an important subject to the farmers of Western Canada. The more it is studied the more clearly it will be seen to be intimately connected with the fertility of the land. When we remember that a crop of wheat often pumps up from the soil as much as 300 pounds of water to make one pound of dry matter, the important place that moisture plays in crop production is more readily understood. Lawes and Gilbert estimated that a crop of wheat producing 25 bushels per acre required 500 tons of water to produce it, or an amount of water equal to nearly six inches over the surface of the land. When we consider, too, that 80 per cent. of all growing crops is composed of water, that the ash or mineral matter entering into the structure of plants is a very, very small proportion of the whole, and that all plant food taken from the soil is taken up in solution, i. e., dissolved in water, we begin to see how necessary it is to have a liberal supply of water for growing crops. Then, too, when we compare the amount of rainfall in Western Manitoba and the Territories with that of Ontario, we find that it is only about one-third as much, and were it not that a goodly portion of it generally falls during the growing season we would be badly off indeed. Last season taught us very plainly

years out of every five the rainfall there is insufficient to supply the moisture necessary to produce a good crop. When a water season has come his methods of cultivation were found little, if at all, prejudicial. Here, as everywhere else, sound science and successful practice go hand in hand.

METHODS OF CONSERVING MOISTURE.

1. Frequent Cultivation—Of the methods of conserving our rainfalls that of frequent cultivation is best known and practised. When water falls as rain it soaks into the land, but when the rain ceases then evaporation commences. The wind and sun dry the surface soil and this is accomplished more quickly if the land is lying loose and open, in rough lumps, more slowly if compact. The same thing takes place with newly-plowed ground, hence the value of the harrows following right after plowing, instead of allowing the land to lie for days. As the moisture in the surface soil dries out, its place is taken by moisture from the soil underneath brought up by capillary attraction. We may liken it to oil moving up the wick in a lamp as the oil is burned at the top of the wick. The power or force which causes the oil to rise is called capillary attraction and the same power is constantly at work in the soil, and farmers should study it, because it does a great deal for them in furnishing moisture for growing crops from all the lower layers of soil. Capillary attraction will furnish oil

the finer the particles of soil the larger the cooling surface presented. It may be a surprise to many, but it is nevertheless true that air moves through the soil, in fact, plant roots will not live in soil that air has not access to. The amount of moisture condensed from the atmosphere in the course of a summer is considerable, and well worth trying to secure by careful cultivation.

2. Summer Fallowing—With many people here in the west the idea of summer fallowing is that it gives the land a rest, brings it into good tilth and helps to kill foul seeds. A more correct idea for our somewhat dry climate would be that it collects the available moisture of two years to grow one year's crop. Its usefulness in killing foul seeds depends upon the work being intelligently done. If fifty acres of land are plowed straight along and never a stroke of the harrow given until it is all plowed, the dry atmosphere will have absorbed all the moisture out of the land. To preserve this moisture each day's plowing should be harrowed before night. If this is done there will be moisture enough in the land to germinate weed seeds. These can be killed with the harrow and by harrowing every two weeks successive crops of them can be disposed of and the moisture preserved as well. Another advantage of this mode of working may be mentioned in passing, that is that the frequent surface cultivation consolidates the land below much better than



On the Farm of Wm. Cox, near Stockton, Man.

how narrow is the margin upon which we depend for our large yields of No. 1 hard.

A close study of the rainfall shows that where it is less than 20 inches during the year, or where there is an unequal distribution of it, the growing of successful crops becomes somewhat problematical. We are very near that boundary line in Western Canada. In the Red River Valley there is usually more than sufficient rainfall, but this becomes less as we travel westward until we come to where the influences of the Rocky Mountains are felt.

With these thoughts in mind let us study our methods of handling the soil and see whether they are such as to best retain the rainfall, and thus preserve in our soils the necessary amount of rainfall for the successful growth of crops. The fact is, too little attention has been paid to this subject. On all our best grain growing soil the main idea has always been to get a big crop of wheat. Skilful conservation of our limited rainfall is the surest way, in our humble opinion, to the realization of that idea. If this were made the pivot about which the cultivation and cropping of land were made to swing there would be less difficulty about good crops. The carrying of this plan into regular practice is really the secret of Mr. MacKay's splendid wheat yields at the Indian Head Experimental Farm. For many years his avowed aim has been to cultivate so as to save all the rainfall available. Four

for the flame in the lamp, as long as there is oil, so, too, in the soil, it will carry up water until the ground is dried out and cracked open several feet deep. By blowing out the lamp the upward movement of oil is stopped; by frequent stirring of the surface soil evaporation is checked because capillary action is interfered with. The moisture brought up is deposited in and under the layer of soil stirred, and all have seen how moist a well-worked summer fallow soon becomes. The top layer of fine soil is sometimes called a "dust blanket," because it keeps in the moisture which would otherwise be carried up and evaporated. To be most effective this blanket must be stirred frequently, and as soon as possible after every rain. Harrowing a crop after it is up to kill weeds also does good in checking evaporation by making the surface soil finer.

Frequent cultivation will destroy all weeds, in fact, some think that this is the object of it and only cultivate when the weeds show badly enough to need it. If the work is done on the principle of gathering all the moisture possible, the weeds would all be killed because there would be sufficient moisture present at all times to germinate the seeds in the ground.

A fine soil has another advantage. The cool soil condenses moisture from the warm air that circulates through it. The warmer the air the more moisture it contains and

rolling would, and so produces an ideal seed bed for wheat, one from which you may expect rapid germination and an early well-ripened crop of the highest grade.

The practice once followed here of allowing a crop of weeds to grow on land that was to be fallowed until they were quite large before being turned down as green manure is discredited both by science and practical experience. Weeds, with their broad leaves, are great machines for pumping the moisture out of land. A heavy crop of weeds is likely to do more harm in wasting moisture than the good they do when plowed down as green manure, besides through the land being drier it is harder to plow.

3. Campbell Method of Soil Culture.—This method is new to Manitoba farmers, but it has been so successful in the sub-arid district to the south and west of us that it promises to be a useful method to try here. His system consists of an implement for packing the lower layers of plowed ground while it leaves the surface rough. The packing of fine soil at the bottom of the furrow slice checks and holds moisture while the rough surface prevents blowing. Special implements are also devised for sowing and cultivating the soil. The reason I mention this system is that I see in this sub-surface packer an implement that promises to be a useful one for us, whether we follow the whole of this method or not. This

packer was tried in several places last season and those who tried it were well pleased with its work. Another season will probably see a more extensive test, and we will be able to form more definite ideas about it. Meantime farmers will do well to see it work if they have the opportunity.

(Concluded in next issue.)

Plowing Matches.

CARTWRIGHT RULES—The Cartwright Agricultural Society will this year hold a plowing match some time in June, at which the principal prize will be a silver cup donated by Lord Strathcona. Besides the special conditions referring to this cup, which must be won twice by the same man before it becomes his personal property, the society has adopted the following general regulations to govern the competitions:—

1. That the Society adopt the following score card: Straightness, 15 points; feathering, 10; in and out at end, 10; depth and width of furrow, 10; evenness of land, 10; finish, 10; covering weeds, 30; width of land, 5; total points, 100. That the judges give each plowman a score card with the number of points he has gained.

2. That each plowman draw for his lot to plow, and each lot to be plowed in a certain time, which shall be specified by directors on day of match.

3. That no plowman shall be allowed more than one man to assist him in setting poles, etc., said man not to interfere with plowing, and only the man who plows the lot to be allowed to touch the plowing, and that only with his feet.

4. That there be a competition for 16-inch sulky plow, depth of this furrow to be not less than 5 inches and to be judged with score card as above stated.

5. That there be a competition for 14-inch gang plows, depth of furrow not less than 5 inches. Judging by score card.

6. That there be a competition for boys under 15 years of age with a 14-inch plow. Furrow to be not less than 5 inches deep and judged with score card.

7. That there be a first, second, third, and fourth prize in each class of competition.

The directors of the Agricultural Society invite everybody, and especially the young men of the district, to compete at this plowing match. The prizes will be announced later on, but among the more valuable are: Strathcona cup, plows, farm implements, furniture, etc., and cash prizes.

BLYTH — The fourth annual plowing match under the auspices of the Blyth Farmers' Institute will be held on June 16 on the farm of Frank Baker, sec. 29, tp. 9, range 18, Brandon Hills district. From present indications this promises to be the most successful plowing match yet held in the Province of Manitoba, and is expected to far excel any of the former matches, the phenomenal success of which has been duly acknowledged. Competitors for the honors will find the land of good quality on which to test their skill. The prize list already aggregates over \$500 in value, and further contributions are sure to come in before the list closes.

BRADWARDINE. — Woodworth Municipality has arranged to hold a plowing match on the farm of W. H. English, 10, 12, 23, on June 28.

OAK LAKE. — The annual plowing match will be held on June 21. It will take place on the farm of Donald Cameron, two miles east of the town. The municipal council declined to help the funds, but private liberality will make up all that is wanted. Prizes, classes and rules will be similar to those of last year.

VIRDEN. — The Virden Agricultural Society, acting in conjunction with the Farmers' Institute, have arranged to hold a plowing match on the farm of Major Hosmer

on June the 27th. There will be five classes each for men and boys, including 14 and 16-inch sulkeys and gangs. There will be a full programme of athletic sports arranged for the occasion.

Irrigation in Southern Alberta.

E. T. Galt, of the Galt Mine Co., at Lethbridge, in a recent interview, gave some particulars concerning the progress of the irrigation system which is being constructed in the country in the vicinity of the coal town. "Up to the present," said Mr. Galt, "everything points to the complete success of the undertaking. There are 200 teams now on the work, and it will soon be completed. The land which will be watered by the irrigation canals is as fertile as can possibly be desired, and we expect between two and three hundred settlers will occupy this part of the country during the coming season."

An Expensive Mistake.

The Northern Elevator Co. of Winnipeg has just lost a suit in which \$30,000 was involved. In October, 1897, this company shipped 30,000 bushels of wheat from Fort William, consigned via the City Elevator Co., Buffalo, for shipment to New York via the New York Central R. R. By mistake the Lehigh Valley R. R. was put into the bills of lading as the Buffalo consignee. This company accepted the grain, stored it in the Sturgis elevator and insured it. In a few days the mistake was discovered and the Lehigh company turned over the grain to the New York Central, cancelling at the same time the insurance. The receiving company did not renew the insurance and shortly after the elevator was burned down. The Lehigh denied responsibility for the loss and the jury before whom it was tried sustained their defence.

Summer Shows.

Shoal Lake—July 5 and 6.
Portage la Prairie—July 5 to 7.
Emerson—July 6 and 7.
Oak Lake—July 7.
Winnipeg—July 10-15.
Brandon—July 18-21.
Virden—July 25-26.
Regina—July 25-26.
Oak River—July 26.
Cypress River—July 27 and 28.
Turtle Mountain, Boissevain—July 27-28.
Killarney—Aug. 1-2.
Minnedosa—August 2.
Central Assiniboia (Indian Head)—Aug. 2-3.
Carberry—Aug. 3-4.
Neepawa—Aug. 8-10.
Moose Jaw—Aug. 9.
Manitou—Aug. 9-10.
Rolling River—Aug. 18.
Toronto, Ont.—Aug. 28-Sept. 9.
Calgary—Sept. 4-6.
London, Ont.—Sept. 7-16.
Ottawa, Ont.—Sept. 11-23.
Morden—Sept. 27 and 28.

Will secretaries of other shows intending to hold a summer fair, please notify us of the dates decided upon.

A farmer in the southwest, where buckwheat is very abundant, strongly urges the use of the harrow for its destruction. The stems are very easily broken and by turning the harrow upside down on any warm day the weeds will be floored while the grain takes no harm whatever. As long as the weed does not get its second set of leaves formed, the breaking down of the stalk means certain death.

Value of Thorough Cultivation.

California has had a very dry season, and therefore the following testimony of M. Jongincel, of Santa Clara County, at the Courtland, Sacramento, Farmers' Institute meeting, has special value. Although growing fruit, the principle he follows is equally applicable here in gathering and storing moisture in a summer fallow. He says:—

"I have a little place in the foothills, near San Jose, where we cannot irrigate. Last year we only got eight inches of rain. I plowed my land in January, harrowed it twice, and cultivated it good and deep about twelve times after that, harrowing after every second cultivation to close the big furrows made by the cultivator. The result was that I raised ten tons of green prunes on five acres and a half of ten-year-old prune trees. Now, I do not say this to scare people out of irrigating, but merely to show that we can raise good fruit by attending a little more thoroughly to cultivating and pulverizing the soil than is generally practiced by orchardists."

A Lesson From Russia.

A writer, who seems to know something about the matter, says recently that Russia is paying the penalty of the wholesale deforestation of the country that has taken place during the present century. Fifty years ago central Russia was covered with forests, which played a very important part in making the adjoining grain land productive. They acted as reservoirs of the winter snows, preventing them from melting too rapidly, and retaining them for the gradual irrigation of the land as far into the season as June. To-day these tracts are treeless plains; the snow thaws directly it falls, the rivers carry off the water, and in the early summer the land becomes dry and parched; and so the harvests fail. Russia is now suffering from the destruction of her natural features; deforestation has adversely affected her climate. The lesson is one that we should do well to learn at home. Great Britain has also suffered, if not to the same degree as Russia, from the destruction of her woodlands, and in recent years there has been a demand for replanting and reforesting treeless wastes. Ontario, Quebec, New York State and many other places are also suffering from over-clearance of the forest. Let us not forget that the present distressful condition of the famine-stricken Russian peasantry is largely due to the destruction of the natural reservoirs of moisture—the forests. The little forest that is left in Western Canada should be jealously guarded and every opportunity embraced to set out trees.

Careless methods of farming also prevail in Russia. The humus—the great moisture holder of the soil—has been exhausted, and this no doubt aggravates matters. In this, too, Western Canadian farmers want to look out. Under prevailing conditions of cultivation, the tendency of all our farm operations is to exhaust the store of humus in the soil and thus reduce its power to hold water.

The Tasmania Agricultural Gazette gives a report of wheat growing experiments made by a farmer in that colony that rather throws into the shade some of our returns here. Over a dozen plots were sown at the rate of 1 lb. of seed to 2½ perches. Three lots grew so rank as to measure 6 feet 4 in. long in the straw and were knocked down by a storm of wind and rain. The rest stood up fairly well, and one lot yielded at the rate of 68 bushels, 53 lbs. of grain per acre. Another made 59 bushels, 31 lbs. The best yields of the previous year were 60 and 53 bushels per acre.

How to Get Better Crops.

We have delayed publication of this issue that we might be able to give our readers a short synopsis of the address given by Professor J. W. Robertson at Brandon, on the evening of Tuesday, June 6th. In substance his teaching on this question is just an adaptation to the cultivation of our land of the Darwinian principle of the survival and ultimate certain triumph of the fittest. This doctrine applied to actual practice says in effect: find out as fast as you can what varieties of the plants you want to cultivate are best adapted to your soil and climate, sow them on your best land according to the methods of cultivation which experience has shown to be most suitable, pick out of the resulting crop the very best of the seed, repeating the same process year after year, and you will gradually get up to a yield of from 20 to 40 per cent. more than you are getting, or, can get, by your present ways of working. They are bound to run down the quality and quantity of your yield with as much certainty as the other plans advocated would improve those yields. It is a mistake to think that new varieties and change of seed will cure the degeneration now steadily going on with the crops of most farmers. Unchallengeable tests plainly prove that the right sorts of seed properly treated will go on improving as the result of adhesion to the line of action laid down. It takes many years to naturalise new importations. They begin low down in yield and most of them stay down. The best of them have been always behind what you can get out of the best of what you now have.

This is about the substance of the evidence recently given by Professor Robertson before the Agricultural Committee of the House of Commons at Ottawa. The principal points in the exposition of his views and the evidence by which he supports them, were given in his Brandon address.

Wheat is our principal export crop, the crop our soil and climate are adapted to producing in great perfection. But farmers themselves can see that the average quantity and quality of the yield on all the older lands are not what they were. We export more bushels, but the yield per acre is decreasing, while Great Britain has added 30 per cent. to her yield per acre within the last 30 years, and France has actually doubled her yield per acre in 40 years.

This is mainly because they are farming more carefully. We cannot follow all the methods of rotation and working and manuring by which their results have been attained, but we can, and ought, to do better than we are now doing. We are really running down hill, some slower than others, but our progression is the wrong way.

To remedy this we must select the best of our known varieties, say Red Fyfe in wheat. A good plan is to cull the best heads from our best land, sow the large, heavy kernels for next year's seed on what may be called the seed grain plot, which should be on land most fit for the purpose, and so on along the same lines, year after year. In the past good money has been made by a few who acted on this hand picking plan. If it is not convenient to pick seed by hand then let it be selected through the fanners, as Mr. Bedford always does now.

Shortage of moisture is more common than an excess of it in this climate, and all our farming should be carried on with a view to saving what there is, by having enough humus in the soil to retain it; by cultivating to increase the fitness of the soil to hold it, as is done by good summer fallowing; and by preventing undue

evaporation, which we can do by harrowing, so killing weeds and providing a dust blanket at the same time.

Inherited vigor in the seed as attained in the ways already indicated is a great point. The grain from the most productive part of the field should be saved for seed. If a neighbor has a field going more bushels to the acre than your own, then obtain seed from that. Seed grain from the biggest crop in the locality is the rule to follow. Then the large and heavy seeds of a good strain give bigger and better crops than the small light seeds. The store of plant food in the seed is what nourishes the young plant at the critical time until it feeds through its own roots and leaves.

The next point is to give it a good start when we do sow it. A few days' warm sunshine, how valuable to the early wheat plant. Soil preparation of the right kind does its part and away goes the plant straight into lusty life, to grow freely till along in July, when growth of straw should nearly cease and formation of the seed for next year be the main business. In seeking to promote vigorous plant growth, we must be careful to discriminate between the conditions which are favorable for the continued growth of the roots, stalk and leaves, and those which favor the formation of seed for whose sake mainly the other parts exist. We may so manure as to grow an excess of the inferior and vegetative parts of the plant and have a poor quality and diminished quantity of the seed which they are there to perpetuate. For the best yield and highest quality, growth of the stalk should not be excessive or prolonged. A bareness of plant food in the soil at the ripening period makes for superior quality and quantity of seeds in the heads.

In the selection of seed, quick germination, combined with extra productiveness, are the points to be sought. Variation within limits is the law of plant life. Our aim should be to get seed from plants that have varied in the right direction. When the seed is carried to a new environment it sets about adapting itself to its circumstances, and may or may not succeed. We should seek out the varieties in that crop, that by their vigor and productiveness, show they have succeeded in mastering the difficulties of their new situation.

The color and habit of growth of a plant do not vary, the time of ripening and hardness change a little but productiveness, the main thing in that plant, does vary a great deal under the influence of climate, soil and cultivation.

More reproduction without selection is of no value and there is no use in reproducing year after year for test purposes varieties that fall below the average of the best of the locality. Of 47 varieties of wheat tested on our experimental farms last year, no less than 32 appeared in the lists of 12 best yielders at the five farms; and so on through all the grains. Of 195 varieties of spring wheat, oats, barley and peas tested on the five experimental farms last year, 138 got into the lists of best 12 or 6 best varieties. Very little advance is being got in that way. In fact, the tables of yields read very like the outcome of a game of chance.

The principle of selecting and sowing on the same farm continuously has ample support from carefully made tests, the latest evidence being that of Professor Zavitz, at Guelph. Mr. Bedford gave the same testimony here.

In conclusion, every farmer should select on his own farm, preferably by hand, the best plants for seed, and from that work along year by year in the same way. The present annual value of the farm crops of Canada may be put at \$280,000,000. An increase of 25 per cent. on that amount is possible through special selec-

tion of seed and corresponding cultivation, and it is in the best interests of the individual and the country that the principles this address seeks to unfold should be known, discussed, and if found correct, acted on without undue delay.

Messrs. Bedford, S. J. Thompson, V.S., and McKellar, spoke shortly in support of the principles enunciated by Professor Robertson. We hope to give in our next issue further details, which want of space prevents us going into now.

John Bray, a Hamiota farmer, is likely to lose his eye as the result of a chip flying off his plow point while he was fitting it on to his plow.

A. J. Cotton, Treherne, in addition to his present holdings in that district, has secured three sections of choice land in the Swan River country. He has seeded 650 acres already at Treherne.

Stephen Kozonski, a Riding Mountain Galician, lent his wagon at the break of the snow to a "white man," who was going further out land-hunting. The wagon has not been returned, and the borrower, if caught, should have the lash applied where it will do most good.

Farmers' Institute meetings are announced at Saltcoats and Yorkton during the second week of June. Addresses will be delivered by Mr. Bulyea, Commissioner of Agriculture for the Territories, and Angus MacKay, Superintendent of the Indian Head Experimental Farm.

Owing to the extremely wet season last fall there will be some doubt about the vitality of corn intended for seed purposes. The germ of corn is on the outside at the point and is easily affected by dampness when curing. It will be a wise plan to make a test of the germinating power of the corn you buy in order to avoid any possible failure through lack of vitality.

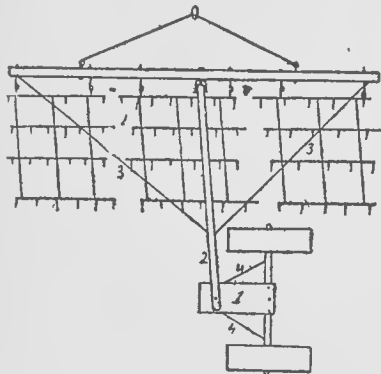
Not so very long ago potatoes formed and matured a multiplicity of seed-balls or apples—the true fruit of the potato vine. Now we rarely see a seed-ball. The reason is that potatoes have long been cultivated for the tubers. The tubers have been increased in number and size by selection, and the vines give to them the nutriment which the wild potato gave to the potato fruit.

It is said the Peavey Co., one of the largest concerns of the kind in the world, has decided to build a monster elevator at Duluth, of which the walls are to be all concrete. Small grain warehouses of this material are built along the Danube and they keep the grain in the best of condition, while the risk of fire is very much less than in any ordinary wooden building. The cement is expected to cost more to begin with, but the saving of insurance afterwards will more than offset the additional first cost. The Great Northern Railroad has fine steel elevators at Buffalo of very great capacity, but they have cost much more than concrete will.

In getting corn to plant for fodder purposes, do not get the big growing varieties. They are all right in some places, but take too long to mature in our short summer. Corn can be grown successfully, but we must be content with smaller varieties, such as North Dakota, White Flint, Longfellow, Pearce's Prolific, and varieties of such a character. Beware of what are called the dent varieties of corn for fodder purposes. They can be distinguished from the flint varieties by being softer, by having a dent in the top of the kernel, and by being long and slim in form—a "horse-tooth" corn. The flint varieties are rounded in form and much harder than the dent ones. The dent varieties are nearly all large growing ones—too large and too late for Western Canada.

To Save Walking.

Many a boy, yes, and man, too, gets very tired during seeding time. Following the harrows all day is no fun. Let the boys try their ingenuity at making a riding contrivance like the accompanying illustration, which a Yankee farmer in Nebraska sends an exchange. He attaches it to his harrows and does no walking. For wheels get an old pair of separator wheels or other low wheels, or a pair of old binder wheels and rig them up on an axle. A piece of gas piping will do, or the axle of an old hay rake. In the illustration, which represents the attachment while turning, 1 is a piece of two-inch plank, 2 ft. long and 1 ft. wide, securely fastened at one end to the axle and



at the other end to 2, which is a 2x4 hard wood scantling or pole or binder tongue long enough so that the harrow will clear the wheels in turning. To do this it will have to extend at least four feet behind the harrows. The front end is fastened to the draw bar by means of two clevises. Bore a half inch hole one foot from the rear end of the scantling and likewise one foot from the end of the plank and put a bolt through and draw up medium tight. 3 3 are common wire braces to hold the chariot behind the harrow, and 4 4 are iron braces. Now fasten on some kind of a seat, a spring one if you can, and you are ready to take it easy.

Institute Workers Meet.

The third annual meeting of institute workers and directors of the continent was held recently in Rochester, N.Y. A large number of states were represented and the Province of Ontario. T. B. Terry, the well-known institute worker of Ohio, was present and made a good address. He favored a fall meeting of institute workers to formulate plans for the winter, so that all would work in harmony. He also preferred holding meetings in small places rather than in large centres. Small meetings scattered over the country with a small force of speakers he thought were productive of more good than two and three day meetings in one place. Farmers will not go far from home, therefore the institute must go to them. Great stress was laid upon some one at each place that a meeting was to be held, taking hold and pushing things. Numbers do not always count, as many times small meetings are the best.

INSTITUTE WORK MUST BE EDUCATIONAL.

The work must also be progressive and must reach all classes of farmers, or it will not continue to be popular. Giving general instruction and information is all right, but it is not enough, we must work for better farms and better homes. It was pointed out that it was detrimental to the best interests of an institute to make it a sort of entertainment. An institute speak-

er, to be successful, must keep abreast of the times, if he doesn't he will soon be a failure as an institute worker.

Some delegates were not in favor of employing local talent, as they sometimes neutralize by contradictory statements what men of vastly wider experience and knowledge have to say. Geo. McKerrow, Superintendent of Institutes in Wisconsin, believed in employing men of the right sort, either as local or state speakers. The Ontario system has been to make use of all the local help it was possible to get and it has worked well. McKerrow's conditions in employing a man are: He must be competent, honest, stand well in his own neighborhood, pay his debts and keep ahead of the procession of farmers.

In some places where there is a two or three day meet, an exhibition of farm products is encouraged and small prizes given. The business men as a rule give the prizes. In some places live stock exhibits were made. The delegates favored short addresses and papers and long discussions. Institute meetings on the fair ground on fair day are a dead failure.

Cultivation for a Potato Crop.

Perhaps the farmers of the Northwest are not aware that in Illinois and at other points potatoes have been planted under straw on the surface of the soil and are noted for the fine flavor and large size of the resulting crop. The land is cultivated in the usual way by plowing and planting the seed in drills, to be afterwards covered with a good coat of straw. For a dry season, it is most convenient here to work and manure the land well to begin with; then harrow repeatedly before the potatoes show above ground. It would be a most interesting experiment if, just when the potatoes are ready to peep through the surface, a drill or two were covered with a coat of straw six inches deep as a means of preventing evaporation. In a dry spring and summer this would certainly give a greater chance to the potatoes, and the straw might also help to check weed-growing.

There is too little attention paid in this country to the possibilities for potato-growing. The Farmer has in the past advocated deep fall plowing and manuring as a means to securing a good crop of potatoes. On lighter land, in average seasons,

such treatment may leave the land too dry and loose. Everybody knows that in the winter of 1897-8 there was a very dry soil condition all over the province. Yet, as is noted on page 513 of the October Farmer, Mr. Cook, at Boissevain, had a splendid crop after fall plowing and manuring. He also put in his seed whole, a great help. Seed the size of hens' eggs is the ideal for either a very wet or very dry year. In medium seasons cut seed is all right.

It may be of interest to refer here to Mr. Beaudry's last year's experience with potatoes. He generally plants after stubble, and found this dry out too much when fall-plowed. Therefore, he plowed deep in early spring, harrowing after the plow and repeating the harrowing every few days. About May 15-20, he rolled heavily to make the plow hold when he planted his potatoes, which was done in every turn of furrow with such success that his highest yields averaged 600 bushels to the acre. Deep and thorough cultivation, either in fall or spring are guarantees for a heavy crop in any kind of season.

The Indians at Rolling River are getting up an agricultural society, and will hold a show on August 18th.

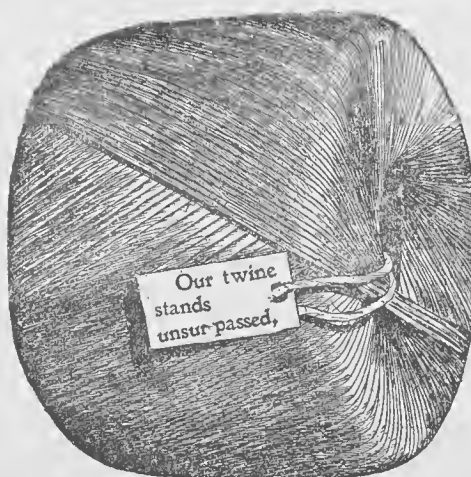
In the drier sections of Nebraska the Russian thistle is now being extensively turned to account as stock feed. Sheep are particularly fond of it.

Grasses are soil builders and are nature's cover for bare spots on the land. They gather nitrogen from the air, produce humus and bring up from the subsoil potash and phosphoric acid which is stored in available form for use of whatever crops may follow.

The value of spraying with sulphate of iron to kill wild mustard was last year pretty thoroughly tested in the North of England. A very bad field had two equal plots sprayed with a 13 per cent. solution. The grain crop was oats a foot high when the spraying was done. The oats were practically uninjured and were easily cut by the binder, while the lot left alone could hardly be cut owing to the strength of the weed crop. Clover was sprayed with a 15 and a 20 per cent. solution for mustard and thistles. The weeds were killed and the clover unharmed. A 10 per cent. solution will, as the result of these experiments, be this year freely used for the same purpose.

SEND FOR
ILLUSTRATED

PRICE LIST



Galvanized Wire :

No. 9, per 100 lbs.	..	\$2 50
No. 12 " "	..	2 75
No. 13 " "	..	2 85

Pure English **Paris Green** at less than factory prices.

BINDER TWINE

at prices which will astonish you.

Garden and Field Hoes,
20c. each.

Nails,

at prices which will pay you to buy.

WILKINS & CO., 166 & 168 King St. East, TORONTO.



Where Fruit Trees Will Grow.

It is more than a dozen years since we pointed out that the northern slopes of the Turtle and Pembina mountains were the kind of situation where, above all others, it was desirable to try fruit trees. The shale outcrop and its overlying soil and vegetation as much as the exposure are factors favorable to the growth of fruit trees and bushes. A recent letter from Nelson Bedford, brother of S. A. Bedford, of the Brandon Experimental Farm, describes his experience in the line of crab apple cultivation. His garden work is only a side issue with him, and is therefore all the more worthy the attention of those who, if they grow fruit at all, must do it with as small an outlay of labor as possible. Mr. Bedford says:—

"I have about twenty crab apple trees bearing. These were planted in the spring of 1893—excepting two trees that are probably 17 years old. The trees are mostly Transcendents, though I have a few Hyslops. Last year from those twenty trees I had seventy-five pails of good crab apples. The young trees bear more each year, and the two old trees bear very heavily; once we had about twenty-five pails off one of the old trees.

"I have tried a great many varieties, but so far have satisfaction only with the Transcendent crab apple, and partial satisfaction with the Hyslop crab apple. The Transcendent does not scald with the sun; it does well, and seems perfectly hardy. The fruit is very far ahead of that grown in Ontario on the same variety of tree. The Hyslop does scald, though not very seriously; it makes good growth each year, is a taller tree, and bears fruit not quite so nice as the Transcendent, nor does it mature so early.

"As to the location—it is, I believe, very favorable—being at the foot of the Pembina Mountains. Just west of the garden the mountain (really only a hill) rises 250 or 300 feet in height, and we are sheltered on the north by an oak bush, and on the south by a part of the hill and by oak timber. To the east is open. The soil is a sandy loam, with clay subsoil.

"I wrap my young trees in the fall with tar paper, partly to prevent rabbits and mice from barking them and partly to prevent the March sun from injuring them. I find that the first hot sunny days in spring is the most trying time on tender trees; the sun appears to thaw out the south side of the trees only, which dry on that side and causes the bark to crack."

Warm or Cold Water for Flowers.

Experiments made at the Wisconsin station show that there is no advantage in using slightly warm water for flowers and tender plants. Water ranging all the way from 32 deg. up to 100 deg. was tried both in the greenhouse and out of doors and no perceptible difference was made. The warmth of the soil seemed to equalize the temperature in such a way that the plants watered showed no evidence of being differently affected by differing degrees of warmth in the water used.

It is thought by many that within 25 years there will be a great scarcity of wood of all kinds in Western Canada. Plantations of hardy trees set out now will yield a magnificent harvest in that time. Try it.

Through Failures to Success.

The Wealthy apple is now known to all fruit growers on the line of Southern Minnesota. Few people who have seen the fine crops of that beautiful northern fruit have any idea how much it cost to produce it. We all know that trees make very poor success in new land. It takes years of previous cultivation before even forest trees will do their best in new land. It was perhaps this fact mainly that was accountable for the early failures made by Peter Gideon at Excelsior on Lake Minnetonka in his attempts to acclimate eastern fruits. It is now 44 years since he began with a bushel of apple seeds, a peck of peach seeds, thirty named varieties of apples, besides pears, plums and other fruits. At the end of ten years all but one crab had died; the country was apparently unfit for such fruits. But Gideon held on, sowing and grafting on different kinds of stocks with failure as the principal result. The State of Minnesota subsidized him for a considerable period, and at last he began to see more promising signs. He got several useful hybrids between the crab and the apple and along that line was ultimately very successful. Eastern varieties are still difficult to grow, but the native apples of Minnesota are grown



Gathering Plums near Brandon, Man.

in large orchards. Perhaps the turn of Manitoba may come some day, too, and in much the same way.

To Kill Currant Worms.

White hellebore is the best and simplest remedy for killing worms on the currant bushes. It is poisonous to the insects but not enough so to endanger a person's life. It can be applied dry by dusting it on the bushes when wet with dew. A little flour added will make it more adhesive. The usual method of applying it is in water, one ounce to three gallons. It soon loses its strength and fresh material should always be obtained.

Paris green can be used very successfully before the fruit is far advanced, but is always more dangerous than hellebore, though more effective in destroying worms. If the bushes are attacked by the currant spanworm—worms that loop when walking—Paris green is the best to use, because hellebore does not seem to be strong enough for them.

Air slacked lime, old and dry is best, mixed with a little sulphur and dusted on the leaves when damp will destroy them. See that the foliage is well-covered with it, and there will soon be no worms. The best

thing to dust the powder on with is a large pepper duster, or a baking powder can with a lot of fine holes punched in the bottom. What is equally as good is to put the mixture in a piece of coarse cloth and shake it vigorously over the leaves. If not washed off by rain, one application will clear off one hatching of worms. When another set hatches repeat the application.

Good Walks.

It is a great nuisance to the housekeeper to have mud tracking into the house whenever it is wet. A great deal of this can be prevented by laying down suitable walks. Coal ashes mixed in the proportions of two parts of sifted coal ashes to one part of salt, wetted and well packed or rammed in place, makes a most durable walk, as it seems to cement together. Another good walk can be made by excavating a few inches, then cover with coal tar, and on top of this put a layer of coal ashes. When this is dry, repeat with another coat of tar and ashes, and so on, until repeated three or four times. In a short time this will harden and make a walk as hard as stone. A more expensive walk can be made by excavating the desired width, filling with 6 or 8 inches of broken stone; grout, or better still, cement con-

crete, then put on a layer of good cement, 2 or 3 inches thick. While such a walk is very nice for the front approach to a house, it is even more satisfactory for every-day use to the barn and out-buildings. A good scraper fixed at a convenient place will help very much in keeping the house free of mud.

It is reported that the poison of bee stings is a pretty sure cure for rheumatism.

Let the boys plant trees with their own hands and water and prune and care for them as their own. Every leaf and bloom and fruit will be a tie that binds them to the home, and if these ties are broken the memory of what they cared for and loved will rest on them like a benediction. Let the girls plant flowers and care for them. Their beauty and perfume will make fragrant the memories of the old home, long after they have made new homes under other roofs and perhaps under other skies. And besides it will teach both boys and girls the great lesson that no man or woman can be lonely or unhappy who is surrounded by the creations of his own hands. His interest and protection and care for the things about him create for him a home and spread over all an interest that only centres in that which costs labor and thought and self-denial.

Tree Planting.

In order to encourage the beautifying of schools and school grounds the Western Arts and Agricultural Association of Brandon are offering to give a library valued at \$15 as a prize to the neatest school and grounds in the province. The competition is open until June, 1900. It is an excellent move and we hope it will have the desired effect. Many of our country and village schools are perfectly bare and cheerless, and must be more of a prison than a place of pleasure to children. There is no reason why they should be thus, if people will only take some slight interest in them. A few trees or shrubs planted around them break the dull monotony and lend beauty to the whole surrounding landscape.

Liquid Manure.

Many plants in the garden can be fed to advantage with liquid manure. Get a barrel that will not leak. Into this put about two bushels of fresh horse dung, fill nearly full with water, stir well and allow to settle. If allowed to stand for a week before using it will be all the better. Use about one quart to three gallons of water for watering plants. If desired to feed plants, such, for instance, as mangolds for show purposes, make a trench around each mangold, having a little bank of earth against the plant so that the liquid does not come in contact with it. Into this trench pour a little of the liquid and allow it to soak down to the roots. Continue adding liquid as it is absorbed, and it will be surprising how great a growth can be obtained. If it is desired to make a stronger liquid it can be done by adding a peck of hen manure to the contents of the barrel. Should bubbles rise on the water it shows that fermentation is taking place, and this must be stopped by adding a little white vitriol, but this will not likely happen if the liquid is used at all rapidly. The barrel can be filled a second time; then new manure should be used.

John Taylor, Morden, is going extensively into strawberry growing. Last year he planted an acre and will set out 16,000 more plants just imported from Ontario.

Professor Lindley estimates that a single frond of the hart's tongue, *Scolopendrium*, which is a small fern, will produce eighteen million spores of seed. "If all should grow they would in a few years cover the whole continent." Many of our native ferns produce seeds in greater abundance than the hart's tongue.

Where to plant flowers is really more important than what to plant. In front of bushes, in the corner by the steps, against the foundation of the residence or out-house, along a fence or a walk—these are the places for flowers. A single petunia plant against a background of foliage is worth a dozen similar plants in the centre of the lawn. Too much paint may spoil the effect of a good building. The decoration of a yard, or of a house, should be dainty. A little color scattered in, here and there, gives the finish to the picture.—L.H.Bailey.

A Minnesota farmer reports that he hauled out his manure in the winter of 1897-98 and laid it round the trees in his grove. Every tree so treated has since died. We have seen a heavy layer of manure spread all over the ground in a grove to kill sweet grass, but never heard of it harming the trees. Such a grove does die if turned into a cattle yard and the hard-wooded varieties die first. Can any reader throw fuller light on this point of the killing of trees by putting manure on their roots. Piling manure round the stems may be bad and injure the bark.

The south of France is the flower garden of Europe. Flower farming is extensive in the Var valley and covers about 115,000 English acres. These gardens produce over 3,000 tons of flowers annually. Lavender is an English production, and is cultivated about Hertford, Surrey, and several other districts. Its name, *lavandula* from *lavare*, to wash, indicates its use, which was perfuming the baths of wealthy people. Its flowers are considered excellent for disorders of the head and nerves. There are districts of lavender fields in Spain and North Africa, where it thrives mostly on high sea levels.

He who by farmin' would get rich
Must dig, plant, and ho, and sich;
Work hard all day, sleep hard awl nite;
Save ev'ry cent, and not git tite.

Agricultural and Experimental Union Report.

The 20th Annual Report of the Ontario Agricultural and Experimental Union has just reached us. It is a most valuable report of some 80 pages. The experimental work, carried on by the students and ex-students of the Agricultural College at Guelph, is growing in importance every year. In fact, for many years the illustration station scheme proposed by Professor Robertson has been, in a small way, carried on throughout Ontario by the co-operative work of the union. The annual meetings are looked forward to with great interest, not only by students and ex-students, but by all leading agriculturists throughout the province. The reports of the various co-operative experiments are full of interesting facts and the addresses of such a man as Prof. Curtis, of Iowa, are well worth going a long way to hear.

In co-operative tests with four leading varieties of barley the Mandscheuri has given the largest yield of grain per acre for the last seven years in succession. Six-rowed varieties have surpassed two-rowed ones for the same number of years. The Oderbrucker comes only 1.5 bushels behind the Mandscheuri in the test for 1898.

In co-operative experiments with oats, the Siberian stands at the head of a list of five leading varieties. This variety has headed the list as the best variety of oats in 1892, '93, '94, '95 and '98, taking second place in '96 and '97. It is a deservedly popular variety in Ontario.

The reports on horticultural, dairy and agricultural experiments were interesting and instructive. Experiments in the study of soil moisture have been started and promise valuable results. The address of Prof. Curtiss on the "Influence of Feed on Quantity and Quality of Milk" was a good one and was well received; so also was that of Prof. J. W. Robertson, the Dairy Commissioner, who explained the principles upon which he was trying to establish illustration stations.

The necessity of plants having a plentiful supply of water during growth is evident when we remember that sometimes 300 pounds of water are used in the building of one pound of matter in the plant.

**WELLAND
VALE
MFG. CO., LD.**

**St. Catharines,
ONT.**

Catalogue for 1899 now
ready, and will be sent on
application.



Territorial Agricultural Societies.

We have pleasure in giving our readers short sketches of a few of the Agricultural Societies in the Territories. Being in new districts, these societies are just starting and have difficulties to contend with that are a thing of the past in the older settled portions. The success of an agricultural society depends very largely on the officers and especially on the secretary. They must all be good canvassers, as much of the success depends on their ability to secure members. We wish these societies every success.

Wetaskiwin.

The Wetaskiwin Agricultural Society was organized early in 1898, with a membership of 121. The first show was held on the 4th of October. Considering the backwardness of the season and other difficulties the society had to contend with the first annual show voted a grand success. The show of grain was not as large as the directors expected, owing to drouth in the spring followed by a June frost, grain was

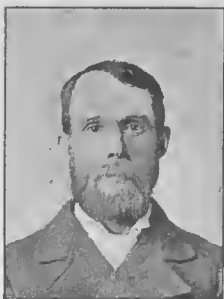
late and many samples not good. Field roots and garden vegetables were good

and competition keen. Some good stock was shown and hopes are entertained of a large exhibit of stock next year because the stock are in fine shape this spring owing to a mild winter, with scarcely any snow, and plenty of green cut feed. The creamery did well last season, making nearly 10,000 lbs. more butter than the year previous. At the annual meeting the following officers and directors were elected:—President, A. Waterston; 1st Vice, J. McDermott; 2nd Vice, John McVicar; Sec.-treas., A. S. Rosenroll. Directors, J. R. Richardson, M. Embertson, T. Willows, C. Shantz, F. Lucas, C. Nelson, J. Thirsk, A. Whittaker, J. West, A. T. Wornacks, J. Fenner, S. W. Lehmann and A. Geer. Auditor, J. McKay.

Innisfail.

An agricultural society was organized at Innisfail in 1892, with a membership of 116. The membership during the succeeding years has varied, dropping to 60 in 1896 and running up to 170 in 1898. Considering the newness of the district this is indeed a good showing and speaks well either for the canvassing ability of the secretary and directors or there is great interest taken in the work of the

society. When the society was first organized and for a few years afterwards, prizes were given for grade sires, but in 1894, through the efforts of the present secretary, this was discontinued. It met with opposition at first, but it has been a good thing for the district and now everybody seems to be filled with a desire to have better stock than his neighbor. Such emulation will result in a great improvement of the stock in the district. The show held last year was far in advance of any previous ones and now the board are making great efforts this year to eclipse last year's show. When it is known that there are three or four breeders of Short-horns and two of Holstein-Friesians in the district, it is easily seen that a good show can be held. While the board are giving every encouragement to the stock interests they are not neglecting others, as will be seen when the prize list is issued. The society is branching out into work that other societies might try with profit. For two years they have been conducting experiments with grains and roots and great interest is shown in the work by members of the society. Not satisfied with a fall show, the society held a very successful show this spring, an account of which is given elsewhere in this issue. John Robinson is the president of this active society and H. A. Malcolm the energetic secretary-treasurer.



H. A. Malcolm,
Sec'y. Innisfail Agricultural Society.

ment of the stock in the district. The show held last year was far in advance of any previous ones and now the board are making great efforts this year to eclipse last year's show. When it is known that there are three or four breeders of Short-horns and two of Holstein-Friesians in the district, it is easily seen that a good show can be held. While the board are giving every encouragement to the stock interests they are not neglecting others, as will be seen when the prize list is issued. The society is branching out into work that other societies might try with profit. For two years they have been conducting experiments with grains and roots and great interest is shown in the work by members of the society. Not satisfied with a fall show, the society held a very successful show this spring, an account of which is given elsewhere in this issue. John Robinson is the president of this active society and H. A. Malcolm the energetic secretary-treasurer.

Davisburg.

This agricultural society was organized in 1892, and has held seven successful annual shows. So successful have the shows been that the society lays claim to being the banner show of the west. That they have reason for this is apparent when it is remembered that at the Territorial fair held at Regina in 1895, Davisburg Agricultural Society won the diploma and \$100 for the best show of live stock made by any of the societies in the Northwest Territories. The members of the society work together well, sparing neither time nor expense in making every annual show a success. This year the directors have decided to hold no show but turn over their grants and other monies to assist Calgary in holding a mid-summer fair. This they feel is only right, as the merchants of Calgary have always been liberal supporters of the Davisburg prize list. This year the old buildings of



Robt. A. Begg,
Pres. Davisburg Agricultural Society.



W. D. Shattuck,
Sec. Davisburg Agricultural Society.

prize list. This year the old buildings of

the society were sold by tender and next season new buildings in keeping with the growth of the society will be erected. The annual show is generally held about the 23rd of September, and has always had a fine day. The balance sheet, too, a most important point, has always shown the financial standing on the right side. W. D. Shattuck is the president and Robt. A. Begg the sec.-treas. of this successful society.

Macleod.

The Macleod District Agricultural Society was organized in the year 1886, it being the first agricultural society to make its appearance in Alberta. Up to that



A. F. Grady,
Pres. Macleod Agricultural Society.

time, and indeed until some years after, agriculture was not very much to the fore in this western country, that is, agriculture as viewed from a farming light, stock raising or ranching being the only industry in the country, and for that matter, it is chiefly yet. After the birth of the society in 1886, it lay dormant until 1890, when

it suddenly sprang into life and has been alive and vigorously kicking ever since, having held a regular annual exhibition and race meeting since that date. For the last three years it has been most ably presided over by A. F. Grady, one of the most prominent merchants of the town, and it is largely owing to his energetic interest that the society is to-day in the successful shape it is. Mr. Grady hails from Owen Sound, Ont. He came to Winnipeg in 1881, then later to Medicine Hat, Calgary, and finally Macleod, of which town he has been mayor for three consecutive years and is now a member of the council. R. G. Mathews, the sec.-treas. of the society, hails from the Emerald Isle, his native place being Malahide, Dublin. He came to Ontario in the spring of 1887, and for a short time farmed near Streetsville, Ont. In June of that year, however, he joined the Northwest Mounted Police force, and after going through the usual course of a recruit's training, was sent to Macleod in the fall of the same year where he has been off and on ever since. After serving five years in the police he became connected with the press and for two years was editor of the Macleod Gazette; he then became engaged in the insurance business, but for the last three years he has been sec.-treas. of the Western Stock Growers' Association, an incorporated and influential body of ranchers, and he is consequently well qualified to handle any business connected with the pursuit of agriculture.



R. G. Mathews,
Sec'y. Macleod Agricultural Society.

Is your society going to have an exhibit of noxious weeds at your annual show? Why not? It is one of the best ways of informing people of the correct names of weeds.

Is your society going to have an exhibit of noxious weeds at your annual show? Why not? It is one of the best ways of informing people of the correct names of weeds.

The Greatest Farmers' Carnival on Earth

IS THE

WINNIPEG INDUSTRIAL

\$15,000
IN PRIZES.

This Year,

July 10th to 15th.

Prize Lists, Illustrated Programme of Attractions and of the Horse
Racing Events sent on application.

WM. BRYDON, President.

F. W. HEUBACH, Gen. Manager.

MATCHES.

THE NAME
E. B. EDDY

is a sufficient guarantee
for the quality of
our Wares.

INDURATED FIBRE WARE.

"Telegraph," "Telephone,"
"Parlor."

TUBS, PAILS,
WASHBASINS, Etc.

FOR SALE EVERYWHERE.

In addition to the foregoing, we manufacture and are in a position to supply in any quantity

WOODENWARE, WASHBOARDS, ANTISEPTIC WARE,

And all kinds of

PAPER, PAPER BAGS, and PAPER PRODUCTS.

THE E. B. EDDY CO., Ltd., Hull, Montreal, Toronto.

TEES & PERSSE, Agents, WINNIPEG.



The Spoiler.

(After the manner of Rudyard Kipling.)

A woman there was and she wrote for the press

(As you or I might do),
She told how to cut and fit a dress,
And how to stew many a savoury mess,
But she never had done it herself, I guess
(Which none of her readers knew.)

Oh, the hours we spent and the flour we spent

And the sugar we wasted like sand,
At the pest of a woman who never had cooked

(And now we know she never could cook),

And did not understand.

A woman there was and she wrote right fair

(As you or I might do),
How out of a barrel to make a chair,
To be covered with chintz and stuffed with hair,

'Twould adorn any parlor and give it an air!

(And we thought the tale was true.)

O, the days we worked and the ways we worked

To hammer and saw and hack,
In making a chair in which no one would sit,

A chair in which no one could possibly sit,
Without a creak in his back.

A woman there was and she had her fun
(Better than you and I);

She wrote out receipts, and she never tried one,

She wrote about children—of course she had none—

She told us to do what she never had done
(And never intended to try).

And it isn't to toil and it isn't to spoil
That brims the cup of disgrace—

It's to follow a woman who didn't know beans

(A woman who never had cooked any beans),

But wrote and was paid to fill space.

Another Side.

By Consolation, Morden, Man.

In the issue of March 20th I saw an essay written by "Daughter of Heth," which I would call a blow at "Squaw," and I thought a bit of sisterly advice might be acceptable. Surely "Daughter of Heth" did not mean all she said. If she did, I think "Squaw" would have a chance to throw her own words back at her, "A better home-maker on paper than in reality!" Any one who would say such hurtful things could not be a good home-maker.

Again, if the coat fitted "Daughter of Heth," she should have put it on and worn it and said nothing, for now we know she must have been hit. Like the little boy, who was throwing stones at a number of dogs which were passing. He threw several stones, and at last one dog turned around and growled. "There," exclaimed the delighted boy, "I've hit that one." So too, I suppose, "Squaw" has laughed with delight at the many she has hit and the fruit her essay has borne.

BRITANNIA, BEAVER and BUFFALO

THE FINEST BLENDS OF INDIA AND CEYLON TEAS PACKED.
For Sale by all Grocers in lb. and ½lb. Sealed Lead Packets.

MacKENZIE & MILLS, 224 Princess Street, Winnipeg.

PACKERS AND WHOLESALE DEALERS.

PACKAGE TEAS

ARE THE BEST.

"Daughter of Heth" spoke of a woman with all of the churning, baking, mending, darning and gardening to do. She also has a cross baby to care for. Well! if she has so many to work for that it keeps her so busy, why does she not get help from those she works for? I also think she would save herself a great deal of cleaning if she would clean her house from top to bottom every week. She would find it a rest to get down on her knees instead of being bent over a mop. Perhaps "Daughter of Heth" understood by enlarged photos those of the Sultan of Turkey, the Czar of Russia and the Pope of Rome, but I think "Squaw" spoke of those of relatives and friends.

This is a free country; everyone may hold their own opinions, and if you differ with any one, do not try to hurt their feelings to gain your own point. We have only one life to live and we might as well make it as pleasant as possible for ourselves and everybody else. Always try to look on the bright side of things and you will not feel so tired when you retire after a hard day's work, especially if you can feel that you helped even one sorrowful person to bear her burden. I thought the Household Column was to be a happy one instead of a disagreeable one. Let us hope there will be no more angry feelings in what ought to be the happiest and most helpful page in The Nor'-West Farmer.

My Home.

By M. E. H., Kneehill, Alta.

I have been very much interested and pleased by the letters from time to time in the Home Department of The Nor'-West Farmer. I enjoyed "Daughter of Heth" and "Mignonette" so much. I think they are right about the mother's influence in the home, and too much hard work. I love to see, and try to keep, my home clean, not shining, or every thing in its place always, for sometimes things will get thrown around where there are children. I think nothing spoils a child's enjoyment so much as too many "Don't's," such as "Don't muss your clothes," "don't dirty the floor," and so forth. Of course, children (and men, too), can be taught to be careful about making unnecessary dirt and save a lot of work for "mother."

When our work is over in the evening we all enjoy our home. We have a good organ and a violin; our two eldest girls play and sing, and the "papa" plays the violin, or tries to, and if not the best of music, they all enjoy it. Our baby boy is always asleep as soon as tea is over, and the five-year-old lassie is sounding letters for next day's school. I think our home the best and happiest place in the world. I want my "hubbie" and children to continue to love their home better than going out to spend the time anywhere else. Although we live away out here in Kneehill, Alberta, where we once thought we could never enjoy life, our home is very pleasant. We always have plenty of flowers in the house and garden; the children have their pony

and lots of pets, and are healthy, happy and contented, growing up pure young girls here on the prairie, as perhaps it would be hard to have them do in a town or village. Of course there are some times when things "gang aft a glee," but we try and remember

"Into each life some rain must fall,
Some days be dark and dreary."

The Housewife's Dress.

By Busy Maid, Saskatchewan.

I have read all the papers in the Household column, and none have said anything in particular about the proper way for the housewife to dress. A ragged or dirty dress is not at all excusable. Almost any woman can afford time to wash and mend. For summer mornings nothing looks better than a print wrapper. It is easily donned, and is not always coming apart at the waist line like separate skirts and bodices. Heavy flannelette wrappers are warmer and more comfortable for winter wear. Black sateen shirt waists are very neat and easily kept clean for afternoon at home. The collars should be "done up" as soon as soiled. Black or dark heavy skirts should be worn with these blouses. Some ladies cannot afford to buy new ones, so the half-worn ones of other dresses may be sponged, bound and mended; then they will look almost as good as new.

Next in importance to the dress are the shoes. Old loose slippers are ruinous to the shape of the feet as well as to the comfort of the wearer. Strong leather boots are the best for morning wear and finer ones for afternoons.

The underwear should be as comfortable as possible. Merino vests are better for winter than woolen, as the latter is almost sure to shrink in the washing. Heavy cotton is best for summer. The corsets should be very comfortable and always kept clean. It is an easy matter to take out the steels and wash the vest, taking care to keep the whalebone from getting very wet. The underwaists, skirts, etc., should be of dark flannelette and without many frills or trimmings. Heavy gingham or denim are easily washed and present a neat and clean appearance. Stockings are better if kept clean and well-mended, than if left with many holes in them. A patch is more comfortable than a sore foot.

Wearers of shirt waists should never go without both a belt and a necktie. A dark silk Windsor is the best kind of a tie. They are easily made up and are washable. Belts are cheap and cover bands and buttons that would be sure to show if not covered with a neat leather belt.

You see it is not at all hard to dress well enough to receive any unexpected friend who may call without apologizing for your untidy appearance. If all buttons are sewed on as soon as convenient and rents darned or patched, clothes may be made to last much longer and look much better than the neglected ones.

Literature in the Home.

Do we fully appreciate the importance of the reading matter which we let into our homes? It is safe to say that few of us do. With a great many persons the selection of

many think at all of the young people when selecting the year's reading?

It is really surprising how many farm homes there are in Manitoba where no reading matter at all is taken! Then, again, there are thousands more where some lone weekly is the only paper which is ever seen.

"the other side" and get some twenty-five cent Yankee tenth-rate novel sheet filled with all sorts of trashy yarns and catch-penny advertisements. This is the kind of mental food which is their education for life!

Surely a great improvement can be made in this matter in a great many homes. Reading matter now-a-days is one of the cheapest of all the cheap things. There is no family so poor but they can afford to have some well-selected reading matter, and none so rich that they can afford to do without it. Remember that "as a man thinketh in his heart so is he," and the way our children will learn to think will depend very largely upon what we give them to read! Let us have well-selected, moral, stimulating, educating literature—and lots of it.

The Attractiveness of the Table.

By Daisy, Wolseley, Assa.

When company is expected, do not we exert ourselves to the utmost to make our table look fresh and attractive? Why, then, may not our table always present such fresh and graceful arrangement? We hear the murmur of a thousand weary mothers, whose long-drawn sighs would say, "We could not possibly keep white tablecloths ready and spotless for every-day use." Yes, I know the difficulty of such endeavors; but, if white cloths are impossible, surely soft colored ones are not; or, if preferred, a dainty, pure white oil-cloth makes a table look clean and neat. The graceful effect of a table may be marred by a cloth that hangs all awry. Doylies, tray cloths and platter cloths, simply but prettily worked, help to keep the cloth clean as well as add a touch of beauty. If skilfully arranged, they lend indefinable grace to the table. It makes little difference whether the dishes are plain white crockery or gold-banded china, if they are not clean and shining. I have seen a pitcher or fruit bowl mar completely the effect of an otherwise dainty table, because they had been used at a previous meal and had not been freshly washed.

When setting the table, try to arrange dishes so that they may be readily passed to all. Perhaps some one of the family is extremely sensitive, and, finding their plate tossed almost to the centre of the table, with knife and fork keeping careless guard, or perilously near the table's edge, or thrown hurriedly upon it, their appetite loses its keen edge; so the meal is spoiled.

The food placed upon the table should be scrupulously clean, wholesome, nutritious, well-cooked, tastily made and invitingly served. Always be guided by the season in the choice of food. Various ways of preparing the same dish make a pleasant change. It is well to use sparingly highly-spiced or flavored dishes for the sake of quick and thorough digestion. The busy mother needs rest, therefore, her precious time should not be wasted over dishes requiring great time and patience in the preparation.

But allow me to state that no matter how attractive the table may look, or how skilfully the food is prepared, if one's personal appearance is slovenly or unclean, the excellence of the food and neat arrangement of the table are completely counterbalanced. A languid manner, too hasty eating, or undignified noises are very irritating, if not disgusting, to others. Accidents will happen and fluids will run, but if a little care is exercised all will be well.

The mind reflects itself in the face, so that if one looks ill-humored or cheerful the whole family may be infected and the meal be made gloomy or merry. Laughter, interesting conversation, funny tales, all help to enliven the mental tone of a dinner and make life brighter. Good manners are an essential element at any table, however humble.



A Young Cobbler.

reading matter seems to be more a matter of chance than anything else. For example, how many parents study the tastes and inclinations of their boys and girls with a view to getting the papers and magazines which will most interest them? Or how

The father easily excuses himself that his family does not care for reading. Generally this conclusion is arrived at without any particular thought at all in regard to the matter. When the boys and girls grow older the probability is that they send to

A Song of Gladness.

Another balmy morning

With rose-tints everywhere
More skies all warm and dappled
More song-birds in the air,
Than yesterday.

More fragrance in the blossoms
More sprays of pink and white,
More rustlings in the tree-tops,
More leaflets green and bright,
More wild flowers in the meadow,
More sun the buds to swell,
More gold upon the hill-tops,
More shadows in the dell.

More jewels in the grasses,
More diamonds on the leaves
More moisture on the green blades
That promise golden sheaves,
Than yesterday.

More bees amid the clover,
More butterflies adrift,
More pansies in the garden
Their pretty heads uplift;
More roses on the bushes,
More lilies on the stem,
More sparkle in the fountain,
And every spray a gem.

Within my heart more singing,
More thankfulness, more praise,
Less fretting, more contented
With God's appointed ways
Than yesterday.
Less worry over trials,
Less fear, less doubt, less care,
More sure life's adverse breezes
Will leave our sunset fair:
More joy in this believing—
"At eve it shall be light;"
More faith that we are nearing
The Heaven that hath no night.
—M. J. Meader Smith.

"Having Eyes, They See Not."

How strange it is that so many people are like the heading of this article. They pass through this world without seeing one-tenth of the beauties with which nature has filled it. There is no faculty that pays so well for its cultivation as that of being able to see things. As a rule the farm boy is more observant than his city cousin, because more conversant with nature; but there are still a great many things he sees every day and yet does not see, i. e., see to understand. The following article by J. E. Wing, in the Breeder's Gazette, illustrates this point so nicely that we reproduce it for the benefit of our numerous readers:—

I once knew a lad who lived on a farm in Ohio. He was very much like other boys, full of very busy idleness, apt to be fishing when his sire would have preferred to have had him hoeing potatoes, sometimes hunting birds' nests when he should have been in school. But as I think of him now I do not think he made much mistake when he hunted the birds' nests, particularly as he did not rob them. I doubt if the columns of spelling or the list of towns in Massachusetts that he might have learned in school would have done him the good that the bird-nesting did.

I know that he had his birds that he made regular trips to see—the robin on the rail fence, the blue-jay in the oak tree, the turtle-dove in the orchard and the quail sitting so quietly in the edge of the meadow. It was his delight that the quail would not fly away as he stood and watched her. He had vague intentions of capturing her and her brood at the right time and raising them in the barn-yard, designs that the wise mother quail suspected and took good care to thwart. I remember that he used to try experiments on the birds now and then—to put eggs from the pigeon-loft in the nests of the turtle-doves and the dove's eggs in the pigeon-loft—and that it puzzled his lit-

tle head quite as much to wonder how they could tell the difference (which they always could) as it did the heads of the birds to wonder about the change in their precious eggs. What mystified our young observer was that the doves would sit for a few days on the pigeons' eggs before throwing them out of the nest.

He watched the chimney swallows, too, and marvelled at their endless flights, their wonderful endurance, and watched long, lying on his back looking up at the sky to see if ever they would light anywhere, never seeing them come to perch anywhere but in the chimneys. And the barn swallows were his pets; he learned to know three kinds of them—the ones that build the pouches of mud under the eaves, the ones that build inside the barns and in cup-shaped nests, and the ones that bore into the banks and deposit their transparent, pearl-like eggs. And all the swallows were welcome; he destroyed none of their nests. And there were many, many other birds that he knew and loved and whose nests he watched, and some that he never saw in nests at all, and very many kinds that he knew only by names that he had given them, as "the little tiny hopping bird that lives in the great oak trees." But there were so many other things to see besides the birds. There were the mice, for instance. He knew well the ways and habits of four kinds of mice; the wood mice, with their great eyes, he admired and tried to tame, and his father would not have approved of his way of permitting old mother mice to go free when he found them tugging away their families of lusty babies, each one holding fast with all its little might, nor did the teacher always approve his bringing stray mice to school, which now and then escaped, to the dismay of the little girls. And there were

the moles, too; he could not bear to see them killed, so when one was caught too near the lawn he would take it away back on the farm and set it free, for somewhere he had read that they were not harmful to the farmer. And he knew about the muskrats, too, and the woodchucks, and trapped them and learned to admire them for their bravery and their strength.

This boy had a dog, of course; not merely the farm had a dog but the boy had one and wherever boy went dog went, too. There is much that a dog can teach a boy; their minds are quite similar, only the dog has so much sharper senses and the two cannot well be separated. And then there were the rabbits. When carrying sheaves after the reaper the young rabbits would go skipping about the field and this boy would, of course, chase them and catch one or two and resolve to tame them; and maybe one would be wounded by the reaper, and the boy's love and pity would go out to the timid creature and he would carry it home and try to heal it. But there were so very many other things to see besides the animals. There were the plants. Early in spring the willows put out their furry "pussies" and these were gathered and prized; then the thickets and sunny spots in woodland were closely scanned and their treasures gathered in—first the deep, rich, wonderful mosses, next the tiny flowers, the "spring beauties" and anemones, and after them violets and all the rest, ending up with the waxy mandrake. And when the great apple trees were in bloom and the blackbirds were nesting there and the scarlet tanager and the oriole were calling from tree to tree and mushrooms (morels) came up beside the stumps and the boy had a swing in the old orchard, and sitting beside him in the swing was a sunny-haired, bare-

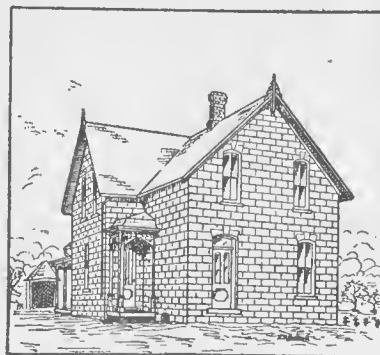
ESTABLISHED 1841.

Work Done
With

THOROLD CEMENT

Speaks for
Itself.

58 YEARS IN USE.



CONCRETE RESIDENCE OF W. H. FRY, FENWICK, ONT.
Built with Thorold Cement in 1877. Size of building, 28 x 32, 18 feet high.

FENWICK, ONT., Jan. 16, 1899.

ESTATE OF JOHN BATTLE, THOROLD, ONT.

Dear Sirs,—I built in the year 1877 (22 years ago) my residence, which is a concrete one, out of your Thorold Hydraulic Cement, and it gives me pleasure to state that, after nearly a quarter of a century, the building is still in first-class condition. I have often wondered why, when building houses, people do not go more into the use of concrete, as I consider a building made of this material is very much cheaper and more durable than one of brick, stone or wood.

I have much pleasure, therefore, in recommending your Thorold Cement to any person having in view the erection of residential or farm buildings.

Yours truly, W. H. FRY.

P.S.—Permit me to add that I prefer it to brick, as the nature of it is cool in summer and warm in winter, and when built with a smooth finish is much more attractive than brick. I intend to build another house of the same material.—W.H.F.

NORVAL B. HAGAR, our travelling representative, is now in the Province of Manitoba, and will be pleased to hear from anyone intending to build. Letters addressed to Norval B. Hagar, c.o. The Nor'-West Farmer, Winnipeg, Man., will reach him.

Estate of John Battle, Thorold, Ontario.

footed girl, his youthful sweetheart, he was very happy and wondered vaguely if it would be any nicer to sit about a golden throne singing songs which he could not remember the words of or sing the tunes very well.

But this lad did not always run and play; he devoured books; lying on the grass in the lawn he would read and read until his small duties called him away, and, what I started to tell of these books, thanks to his mother's wise choosing, were very good and helpful ones. First and best of them all was Hugh Miller's "My Schools and Schoolmasters." He read this book over and over again, and he is not through reading it yet. There was never such a book; it goes to the heart of every boy who gets as far as "The wee doggies, mither; I could na droon the wee doggies, so I brought them hame to you." Then there was another book that when he was a little older he read and read again—Mitchell's "My Farm at Edgewood." That book made a great impression on him, too; it has always been a power to mold his thought and his taste to see and develop the beauty that belongs with rural life, and to see the poetry of it, too; and there was Thoreau, especially "Walden Pond," and other books of like nature that I cannot now tell of. And all these told toward developing that boy's

on birdlife, another on zoology. Best of all, turn boy again and get afield with him; lie on your back again and watch the hawks soar in the blue and the fleecy clouds float by; talk with this boy of yours and see if the hours thus spent are not the happiest and the *growingest* of all your life.

Fretting Again.

One peculiarity about fretting, when indulged in to a great extent, is that it reduces its victims to the very verge of despair. They feel as if it were useless to be satisfied with anything—to ever hope more. Yet a change of scene, and intercourse with the right kind of people, would eventually drive such feelings from their mind.

All who have been housekeepers know, if not from experience, then from observation, how men, wearied with labor, will, on their return home, fret at the smallest trifles. Sometimes it is because they are hungry and tired. If such be the case, I would advise you to get them something to eat as quickly as possible, if you value peace and quiet, and, under the refreshing effect of a good repast, see how amiable they become.

As for women, they are as a rule so sensitive that they are bound to fret—if not

Laws of Health.

The following are the rules formulated by a French physician in a prize competition on the rules for good health. Five hundred writers competed:—

1. General hygiene: Rise early, go to bed early, and in the meantime keep yourself occupied.
2. Respiratory hygiene: Water and bread sustain life, but pure air and sunlight are indispensable for health.
3. Gastro-intestinal hygiene: Frugality and sobriety are the best elixir for a long life.
4. Epidermal hygiene: Cleanliness preserves from rust; the best-kept machines last longest.
5. Sleep hygiene: A sufficiency of rest repairs and strengthens; too much rest weakens and makes soft.
6. Clothes hygiene: He is well clothed who keeps his body sufficiently warm, safeguarding it from all abrupt changes of temperature, while at the same time maintaining perfect freedom of motion.
7. House hygiene: A house that is clean and cheerful makes a happy home.
8. Moral hygiene: The mind repouses and resumes its edge by means of relaxation and amusement, but excess opens the door



C. P. R. Hotel at Banff, Alberta.

character—tended to make him love Nature and to watch eagerly each leaf of her book as it was unrolled and to bring joy with living in the country. He never had any longing to leave the farm nor to dwell in cities; in fact, when he had to dwell for a little time in the city it was a pain to him and he longed again for the fields and the woods.

Now the practical bearing of all this, for it has a practical bearing, is, help your lads—and lasses, too, for that matter—to get their eyes open, to see what is going on about them. To teach a lad to see and interpret the sprouting and developing of a tiny plant from the seed is worth more to him than to teach him to conjugate a difficult verb or solve a problem in trigonometry. To teach him the joy and peace that comes from living a common life among common things, that the great world holds no marvels more marvellous than are happening all about him, and to teach him to see those marvels—that is to educate him.

Children have too many books to-day. They have too much learning and not enough education. Let us get back to the few books, often read, the primitive knowledge that comes from seeing things and thinking on them. Get that boy the two books that I have mentioned, add to them the books of Thoreau and of Burroughs, get him an easy work on botany, another

about one thing, another. A long-nosed, sharp-featured woman frets most after the work is done, and she is completely tired out. Sickness, or confinement in the house, or one room, for a long time, will upset anybody's good qualities unless they are thorough Christians. But naturally placid men and women, who find themselves fretting without any apparent cause, ought to have perception enough to see that it is the friction of the hard-worked machinery of body and mind, and know that unless they bring into use a liberal supply of the Oil of Rest, the whole apparatus will give out after a time, ere the task is half done.

Husbands, drop your labor, take your wives away from their work for a season of undisturbed rest. If your childhood days were happy ones go among your former playmates, and, in recalling old times grow young again. Pick out all the merriment you can. Laugh till your head aches, and avoid every long-faced individual until you are far enough advanced to show them how to enjoy life.

Greedy grocer to farmer's wife, who is supplying him with butter—"This pun' o' butter is ower licht, gudewife." Gudewife—"Blame yersel', then: I weighed it wi' the pun' o' sugar I gat frae ye yestreen."

to the passions and these attract vices.

9. Intellectual hygiene: Gaiety conduces to love of life and love of life is half of health; on the other hand, sadness and gloom help on old age.

10. Professional hygiene: Is it your brain that feeds you? Don't allow your arms and legs to become stiff for want of use. Dig for livelihood, but don't omit to burnish your intellect and elevate your thoughts.

Cure for Weariness.

When you are utterly tired out, or have a bad attack of the blues, get into a comfortable rocking chair or easy corner and have something good to read. Some sunny story that will take your thoughts away from yourself and your troubles and put you into a pleasant frame of mind. This is the best cure we know of, and it is surprising how refreshed you will soon feel.

Coroner—"You say that you told the servant to get out of the house the minute you found it was on fire, and she refused to go?" Mrs. Burns—"Yes; she said she must have a month's notice before she'd think of leaving."

De Muskeetah.

De skeetah am a clevah chap,
 An draws no colah line;
 He co'ts de white man an' de Jap,
 An tells 'em bofe dey's fine.
 An while dey's listenin to his song
 He wins, ten times in nine.
 He ain't got no eddication,
 An his social contact pains,
 Yit de bes' blood in de nation
 Am atricklin thro' his veins—
 An he fights de whole creation
 Fer his strictly private gains.
 Uv a pleasant summah ebenin,
 When yo's settin by yo' do',
 Cousin Skeetah kums a singin
 Uv de happy days uv yo';
 An as sartin as yo' listens
 'Yo' won't lak 'im any mo'.
 'Bout de time yo's interested,
 'An yo'r mine an' gettin ca'm,
 An yo' settles back in comfo't—
 Makes no diffunce who yo' am,
 Up he kums an sock! he takes yo',
 An yo' yells, "Geeru-see-lam!"
 An yo' stracks at dat muskeetah
 Lak a Nawf Car'liny mule;
 Yo' is sartin yo' has killed 'im,
 But you's missed 'im as a rule,
 An de skeetah goes off singin,
 "Never tetched me, yo' ole fool!"
 Dey's a less'n, fren an brother,
 In de skeetah's ways uv sin;
 When you' seeks one thaing a-nothah,
 In dis worl' yo's libin in—
 Git yo' grit up, lak de skeetah,
 An jes' resk yo' life to win.
 —J. D. Corrothers.

Getting Rid of Bugs.

Herr Bernegau has earned the thanks of all housekeepers for his long and exhaustive inquiry in regard to the real value of those substances hitherto upheld as efficacious as destroyers of roaches and other domestic insect pests. The result has been somewhat surprising, inasmuch as it has shown that many of the most popular remedies, on the market are practically of little use. Insects were caught and kept in glass tubes, so that the effects could be closely watched. Fresh insect powder made bugs a little uncomfortable for a while, but they soon recovered and became as lively as before, apparently none the worse for the experience. When mixed with 10 per cent. naphthalin, the powder killed a few of the insects only. Hydrogen hyperoxide was a flat failure. Formalin was quite effective, but it costs too much and has unpleasant effects on the person applying it. Coal oil was deadly, but it has a bad odor and is dangerous where contact with fire is possible. Herr Bernegau finally decided that the perfect insect destroyer is turpentine oil, either alone or with naphthalin. He recommends that the haunts of the insects should be gone over with turpentine oil and naphthalin, applied with a brush. The penetrating of the solution chases the insects out of their hiding places, and a little sprinkling of the oil effectually disposes of them. Where walls are treated with the mixture they should be freshly painted or kalsomined after it has soaked in. When the mixture has been applied to beds or furniture, floors or baseboards they should be instantly washed with a hot solution of carbolic soap (to two and one-half gallons of boiling water add a quart of liquid carbolic soap). To prepare the turpentine oil and naphthalin, a quart of the oil should be put into a half-gallon jug with 150 grains of naphthalin. The jug must be set in hot water and shaken vigorously. To prepare carbolic acid soap common yellow potash soap and commercial carbolic acid should be heated together until a clear solution is obtained.

"DOMINION" ORGANS & PIANOS.

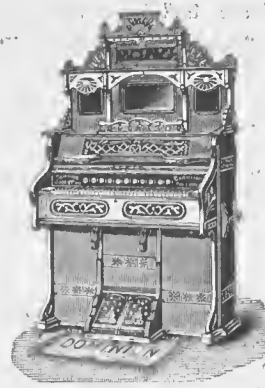


Are the most popular
 Instruments
 manufactured in Canada.

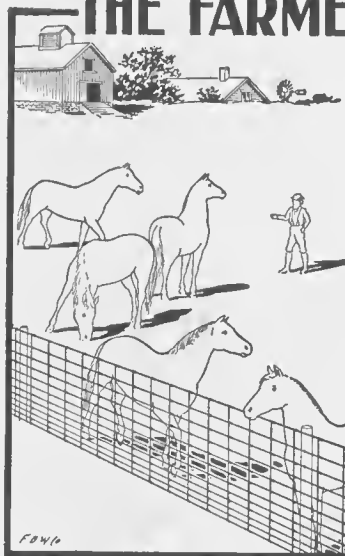
60,000 IN USE.

Write for Catalogue
 and Price to

DOMINION ORGAN
 AND PIANO CO.,
 BOWMANVILLE, ONT.
 Or apply to our Agents in all
 parts of Manitoba and N.W.T.



THE FARMER'S BEST FRIENDS



Good Horses and Good Fences.

Any sound horse is a good horse, but there is only one absolutely satisfactory fence—

THE AMERICAN FIELD FENCE.

Made of large, strong wires, absolutely
 immovable, thoroughly galvanized
 and nicely woven.

A Genuine Money Saving Fence.

Sold by dealers everywhere. If you can't find it, write direct to us for catalogue.

AMERICAN STEEL
 AND WIRE CO.,
 CHICAGO
 and NEW YORK.

Good Things to Have.

The following extract from a speech by President McKinley at Tuskegee, Ala., is submitted for careful consideration:—

"Integrity and industry are the best possessions which any man can have, and any man can have them. Nobody can give them to him or take them from him. He cannot acquire them by inheritance; he cannot buy them or beg them or borrow them. They belong to the individual and are his unquestionably property. He alone can part with them. They are good things to have and keep. They make happy homes; they achieve success in every walk of life; they have won the greatest triumphs for mankind. They will bring you a comfortable living and make you respect yourself and command the respect of your fellows. They are indispensable to success. They are invincible. The merchant requires the clerk whom he employs to have them. The railroad corporation inquires whether the man seeking employment possesses them. Every avenue of human endeavor welcomes them. They are the only keys to open with certainty the door of opportunity to struggling manhood. Employment waits on them; capital requires them; citizenship is not good without them. If you don't already have them—get them."

Wood ashes put in a woolen bag and laid in a tub of hard water will soften it.

We love home folks the best,
 Though they may lack the style
 Of strangers richly dressed,
 They have a tender smile
 For us, and in their eyes
 We read the heart's bequest.
 Of all beneath the skies,
 We love home folks the best.

I Love You, Dear.

I love you, dear! Why, so to Egypt's queen
 He spoke—her Anthony, who in disdainful
 mien

Counted as nothing all that he might gain
 So that his love would smile on him again.

I love you, dear! So ardent Romeo cried,
 While Juliet from her window leaped and
 sighed.

And, sighing, lured the "tassel gentle" on
 To live and love, till life and love were
 gone.

I love you, dear! So to that charming
 dame,

Helen of Troy, the word from Paris came,
 And all the world in Homer's lines may
 read

How, for that loving, half a world did
 bleed.

I love you, dear! Ah, yes, the words are
 old.

To many a woman has the tale been told,
 And yet, the world grows young, if in your
 ear

I may but whisper this—I love you, dear.

Much of the cook's success depends upon her skill in seasoning. Every one knows that the best orange, lemon and vanilla flavoring is made at home, yet how many bits of peel we waste and how many empty flavoring bottles reproach us from the rubbish pile. Have three wide-mouthed bottles, with close-fitting corks. In one place a few broken vanilla beans from the drug store; into the others the thin yellow peel from oranges and lemons. Cover with pure alcohol, and keep adding to them all the year around, and you are never without the best and most useful extracts.

THE GREAT ADVANTAGE OF A GOOD REPUTATION

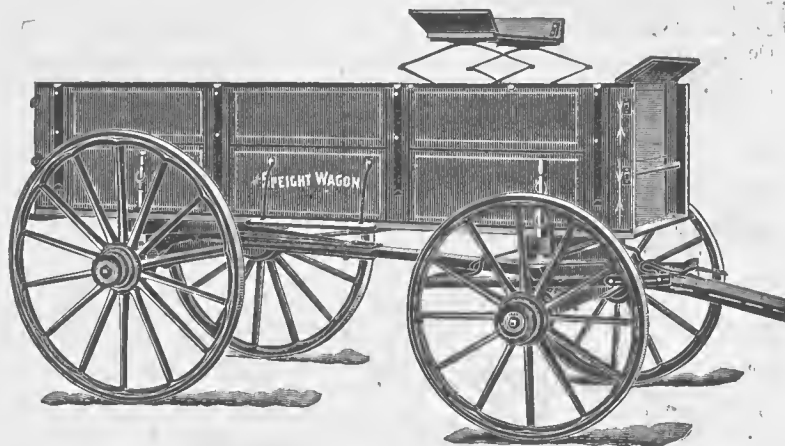
is fully realized and appreciated by the
manufacturers of

THE SPEIGHT WAGON

Their large output of Wagons being
attributed to the fact that THE
SPEIGHT has become so extensive-
ly and favorably known.

If you think of buying a wagon, be sure and get
one with a good reputation. It will pay you to take
no chances.

If you have no dealer convenient, write directly to us for information.



THE SPEIGHT WAGON CO., Markham, Ont.

Dealers should write us for Catalogue and Prices.

Worth Knowing.

A celebrated cake maker gives some valuable suggestions on the art of cake making: "First, I always use the best of everything. I buy my eggs direct from the farmer; my butter is fresh and carefully washed and kept on ice until I want it, and flour, sugar, nuts, flavoring, whatever I use, in fact, has to be as good as can be found. I add a dash of brandy, just as the cake goes to the oven, helps to make it light and also to bake more evenly. My cakes are mixed in various ways according to the sort I am making. The eggs are always very cold when broken, and whipped light in a cool place. I sift my flour two or three times until it is light like snow. My idea of cake and icing is that they should never be sticky or clammy, yet always soft enough to be eaten with a spoon."

In cake making one should give as much attention to baking as mixing. After you place the cake in the oven do not open the door for at least 15 minutes and then do so very cautiously, a slam has caused the fall of many a promising cake. Then, too, never let a cake stand after it is mixed; the oven should always be ready for baking before mixing the cake.

RAISIN SANDWICHES.

Seed and chop half a cupful of layer raisins and moisten them with a little wine. Spread thin graham bread first with butter, then with cream cheese, and then with the minced raisins.

ROAST BEEF SANDWICHES.

Mince fine rare roast beef, season it with salt, pepper, a little Worcestershire sauce and a couple of chopped pickles; soften it with melted butter and spread on white or graham bread.

CREAM OF ASPARAGUS.

Cut young tender stalks into inch lengths, boil until tender in water to cover, and rub through a sieve. Into a quart of hot milk put a heaping tablespoonful of butter, add the asparagus pulp, two tablespoonfuls of thick cream, and pour over very thin slices of hard-boiled eggs.

POTATO SOUP.

Possibly this is the least expensive and the most quickly prepared. Pare and slice three or four potatoes and cook in a very little water. Put a quart of milk in a double boiler, or in a basin over an asbestos mat, that it may not scorch, and add a tablespoonful of chopped onion. Skim out the potatoes when soft, mash and rub through a colander; blend half a tablespoonful of corn starch with a little melted butter, cook two minutes, then stir it into the scalding milk, add the potato and cook five minutes. Serve hot with croutons, small squares of bread browned in a hot oven.

CANNED TOMATOES.

Make a delicious soup. Put a quart of canned or freshly-stewed tomatoes into a porcelain-lined or granite saucepan; add a teacupful of boiling water, a teaspoonful of salt, a tablespoonful or granulated sugar, and a slight dusting of white pepper. In a basin or small saucepan, heat a tablespoonful of butter very hot, do not brown it; add a few slices of onion; cook gently five minutes then add a tablespoonful of cornstarch or flour mixed smoothly with a little cold water; stir and immediately pour in a teacupful of boiling milk, and simmer two or three minutes. Strain and serve with crackers crisped in a hot oven.

OMELET.

Two eggs—break the whites in one bowl, the yolks in another. Beat the latter until lighter in color and very much thicker and to them add two tablespoonfuls of milk, a saltspoonful of salt, a quarter spoonful of pepper. After mixing in thoroughly cut in the whites well beaten. Put a frying-pan on the range, and when well heated pour in the eggs. Have a plate warming. If the knife can cut in without sticking it is done. Put in the oven to dry the top.

ABOUT IRONING.

To get the best results the starching should be solid, stiff enough to stand wear, and flexible enough to give to your movements. A high polish should not be aimed at, but instead a fine even finish. Neckbands of shirts should be ironed in their original shape, and set up at right angles with the shirt to allow the neck free play. Very stiff work does more damage to your linen than washing and wear combined. Solid and flexible is the thing.

When parts of fowl are left over remove the meat from the bones, cover them with cold salted water and simmer until all the "good" is extracted. Reject the meat and gristle, then pound the meat in a mortar (or its substitute), afterward mix well with a teacupful of boiled rice, add a tablespoonful of melted butter, pepper and salt to taste and half a teacupful of the stock procured from the bones. Rub the mixture through a hair sieve, then add the well-beaten yolks of four eggs, and lastly the stiffened white of two. Bake about fifteen minutes in small paper cases. The oven must be moderate, as if for custard.

Left-over veal cutlet, chicken or game prepared as follows is very appetizing, both in appearance and flavor: Cut the meat into neat bits and brush these singly with warm butter, cook for ten minutes in a quick oven after spreading the whole with a paste made by mixing together a teaspoonful each of French and English mustard, two tablespoonfuls of chutney, chopped fine, salt, cayenne and black pep-

per to taste and half a lemon squeezed over the top. Dress some chopped celery or shredded lettuce with a French dressing, place this, mound-shaped, in the centre of a dish on a paper-lace mat, and put the meat around it. Raw cabbage sliced thinly with a sharp knife may be used for the centre.

Harold—"Darling, we'll have a lot to contend with when we are married." Mabel—"Yes, dear; we'll have each other."

Deacon Skinflint—"We've failed again this year, Mr. Dominie. Can't raise half your salary."

Good Minister—"No matter. I have had myself appointed a missionary to the heathen and will soon be in the pay of the board of missions."

"Eh! Air you goin' to Africa?"

"No. I shall stay right here."

Double Meaning. — A young man from the country lately volunteered his services to escort a young lady home from a party. On his way he cudgelled his brains for some interesting topic of conversation to amuse her with, but in vain; he could hit upon nothing until they met several cows, when the swain said, with much simplicity of manner, "Now, isn't it strange, what a motherly appearance a cow has?" To which the lady replied, "I do not think it strange, sir, that a cow should have a motherly appearance—to a calf." The beau was silent during the rest of the walk.

MUSIC

We will mail you 20 pieces of the latest and strictly up-to-date music for \$5, retailing from 40c. each to 75c. When ordering, please describe style you wish; if vocal, range of voice, etc. We guarantee to please.

BARROWCLOUGH & CO.,

BOX 928.

470 Main St., Winnipeg.

ROBT. LECKIE,

IMPORTER AND DEALER IN

Wall Papers & Room Mouldings.

Samples and Prices on application.

425 MAIN STREET, - WINNIPEG.
P.O. Box 317.

Drugs and Medicines.

W. J. MITCHELL,

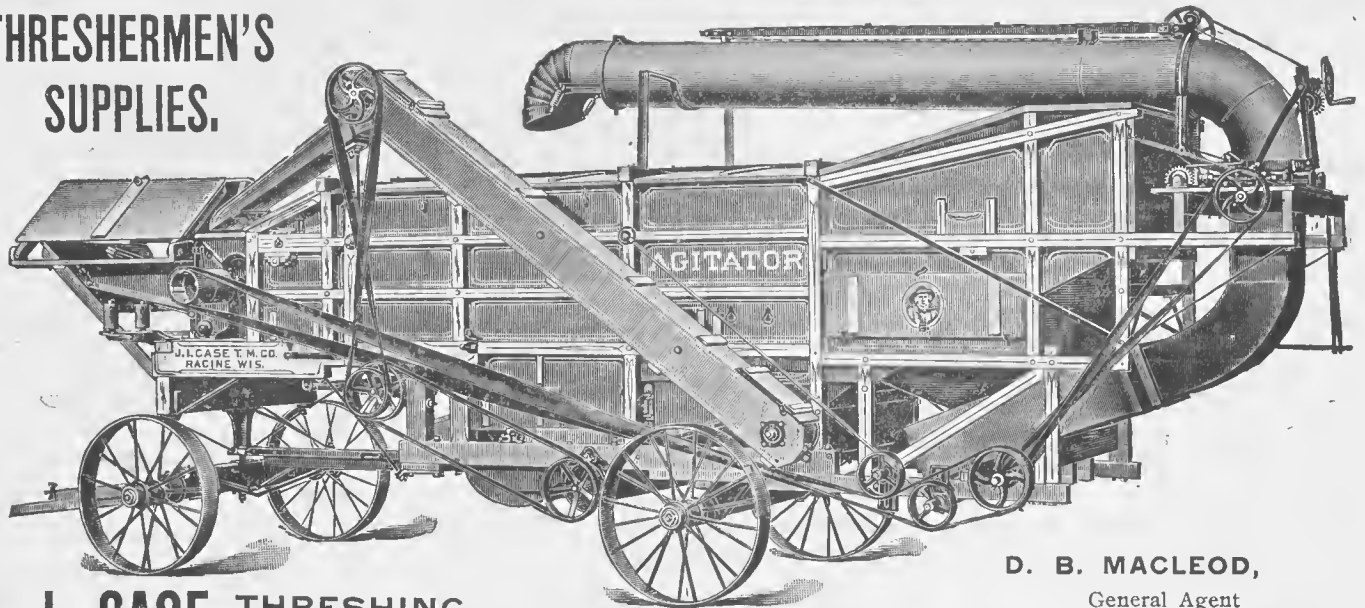
394 MAIN ST., WINNIPEG.

Veterinary Instruments and Supplies always kept in stock.

Your esteemed Patronage Solicited.

Letter Orders given Special Attention.

THRESHERMEN'S SUPPLIES.



**J. I. CASE THRESHING
MACHINE CO.**

Write for Catalogue.

D. B. MACLEOD,
General Agent

Winnipeg Branch.

Care of Table Linen.

In buying table linen it is always best to get good quality, for it is the cheapest in the end. It will wear much longer and gives the table a richer appearance; and if desired a still richer appearance can be had by buying thick, soft matting on purpose to spread under the linen. It is quite expensive, and a nice flannel blanket can be used as a substitute. One lady that I know took two pieces of bleached muslin the size of her table, laid cotton batting between them the desired thickness, and quilted it, and as her table was spread it presented a soft, rich appearance. It is best to have plenty of changes so as not to use tablecloth and napkins until so badly soiled that it necessitates hard rubbing to get them clean, consequently more wear on the material.

Never put table linen in'o soapsuds until you have put the stained places over a dish and poured boiling water through them. It always spoils table linen to see a stain, and upon an otherwise nice cloth detracts greatly from its appearance.

The following recipe will keep linen spotlessly white: One-half pound Babbitt's potash, 1 pound salsoda, 5 quarts of soft water. Dissolve in an iron kettle in a little water. Then add the rest of the water, stir and let settle, then turn off and put in a jug. Use one cup to a boiling of clothes. It will remove tea and fruit stains, but turn the boiling hot water through fruit stains first. Coffee stains let stand in cold water over night. Fine table linen should be rubbed lightly and always wrung by hand; a wringer makes creases which are hard to iron out. Blue lightly but do not starch. When hanging them out hang over sheets, and for fear the pins will leave a soiled place use small pieces of cloth under the pins. Iron when very damp and they will be nice and stiff and look like new.

Borax is a simple but very effective remedy for many things. A solution of borax and water will cure canker sore mouth in adults as well as in children. Wash the mouth with it, and gargle a little in the throat. Unlike many remedies prescribed for such things, it is entirely harmless. A wash made of one-half dram of borax and three ounces of camphor water, is the best remedy I have ever tried for sore and inflamed eyes. Put three drops in each eye, opening and closing them rapidly, so that it will extend over the entire surface.

Learning the Truth.

A school inspector was examining a class in grammar and trying to explain the relations of adjectives and nouns by a telling example.

"Now, for instance," said he, "what am I?"

That was an easy question, and all the children shouted, "A man!" and then looked around triumphantly, as much as to say, "Ask another."

"Yes, but what else," said the inspector. This was not so easy, but after a pause a boy ventured to suggest, "A little man."

"Yes, but there is something more than that."

This was a poser for the youngsters, but after a moment's puzzled silence, an infant phenomenon almost leaped from his seat in his eagerness, and cried to the inspector:

"Please, sir, I know—an ugly little man."

Visitor—"How much the baby resembles its mamma!" Father—"Yes; it talked when it was only six months old."

He—"Yes, I loved a girl once and she made a fool of me." She—"Some girls do make a lasting impression, don't they?"

Jones—"How are the eggs this morning?" Brown—"Very interesting." Jones—"Interesting?" Brown—"Yes; so full of 'chic.'"

A minister preached a very long sermon, and, suddenly halting, said: "And what shall I say more?" "Say Amen," shouted an auditor.

She—"Do you recollect the night you proposed to me? I bent my head and didn't say anything." He—"Quite right. But you've made up for it since!"—Judy.

Sissie—"Gracious, Jack! What immense shirt-studs you wear." Jack—"That's all right, Sis; I'm going to keep up with my buttonholes if it takes a dinner-plate."

"Do you think it's true that every man has his price?" asked the heiress. "I'm sure I don't know," he answered, thoughtfully; "but if you want a bargain, you needn't look any further."

The thrift of time will repay you in after years with a usury of interest beyond your most sanguine expectations; but the waste of it will cause you to dwindle in moral and mental stature beyond your darkest reckoning.—W. E. Gladstone.

To prevent hair from falling out, saturate the scalp twice a week with one ounce of borax, one-half ounce of gum camphor, one quart rain water. Boil all together and bottle.

—There are some people who think that portion of our fertile plains not now occupied should be preserved for our posterity. Few realize the large amount of land there is that is capable of settlement. The fact is that only a very small portion of the land that we know is fit for settlement has been taken up. Outside of this there is land away north that is capable of settlement. How much there is and how far it extends north is not definitely known, but of this much we feel sure there is no need to worry about land for our posterity. The Dominion Government should find out how much of this land is available. Judging from the following report there is more land capable of settlement than the most sanguine dreamed of: "The members of a Roman Catholic mission at Fort Providence are reported to have succeeded in reaping 'a very fine crop of wheat,' the period between seed-time and harvest having been 91 days. Fort Providence is on the Mackenzie river, just west of the Great Slave Lake, in a latitude something over 62 degrees—the latitude, that is, of the Faroe Islands, Southern Greenland, and Hudson Strait. It is about 600 miles north of Edmonton, and less than 200 miles south of the latitude of Dawson City."



WILE
AWAKE

BABY

Needs lots of Sunshine.

\$10.50 will buy an elegant, large-size Hood-top BABY CARRIAGE, rubber-lined hood, nicely upholstered.

\$9.50 for a smaller one.

These are positively the grandest values in Canada. "GENDRON" make.

Expressed to any point for \$1.00.

Send for Catalogue of
**CARRIAGES, WAGONS,
GO-CARTS, &c.**

Scott Furniture Co.
WINNIPEG.

Agents for "Oxford" School Desks.